

Public Utilities

Volume 64 No. 3



July 30, 1959

REGULATED INDUSTRIES AND THE CAPITAL MARKET

By Roland B. Eutsler and James E. Brown

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In Case of Attack

By Herbert Bratter

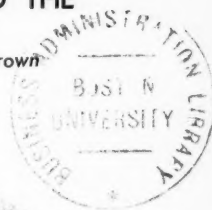
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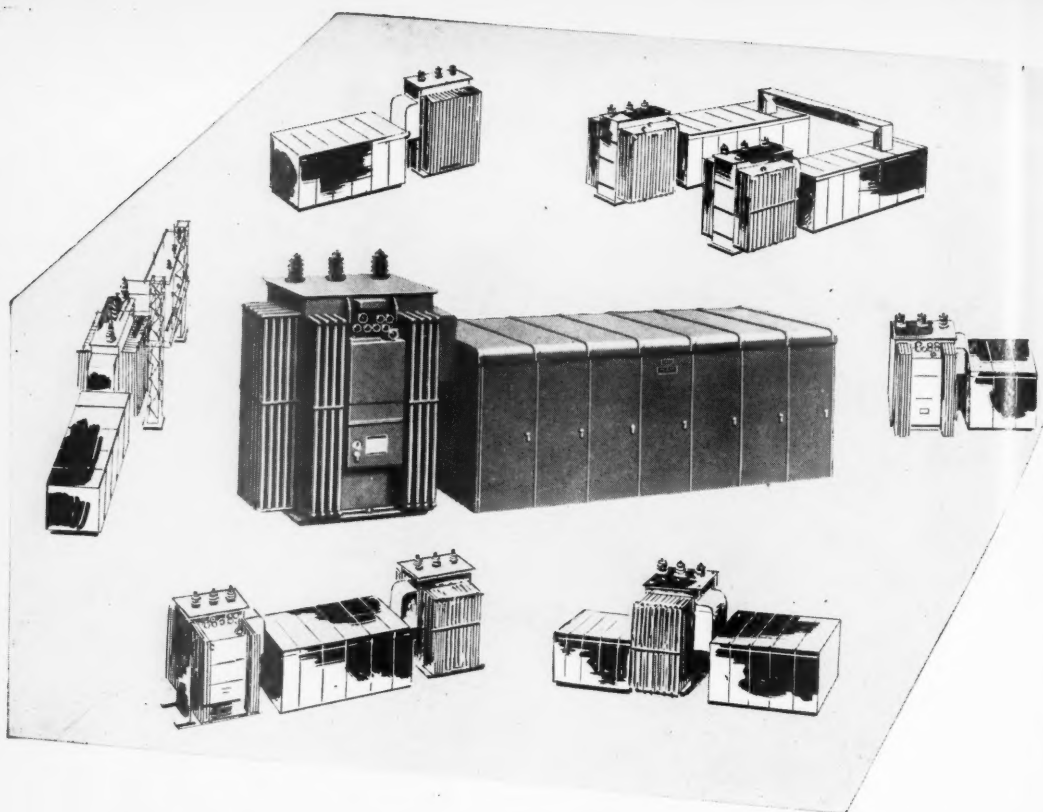
When and How Should the Utility Executive Retire?

By Alfred M. Cooper

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The Labyrinth of Rates





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Public Utilities

FORTNIGHTLY

VOLUME 64

JULY 30, 1959

NUMBER 3



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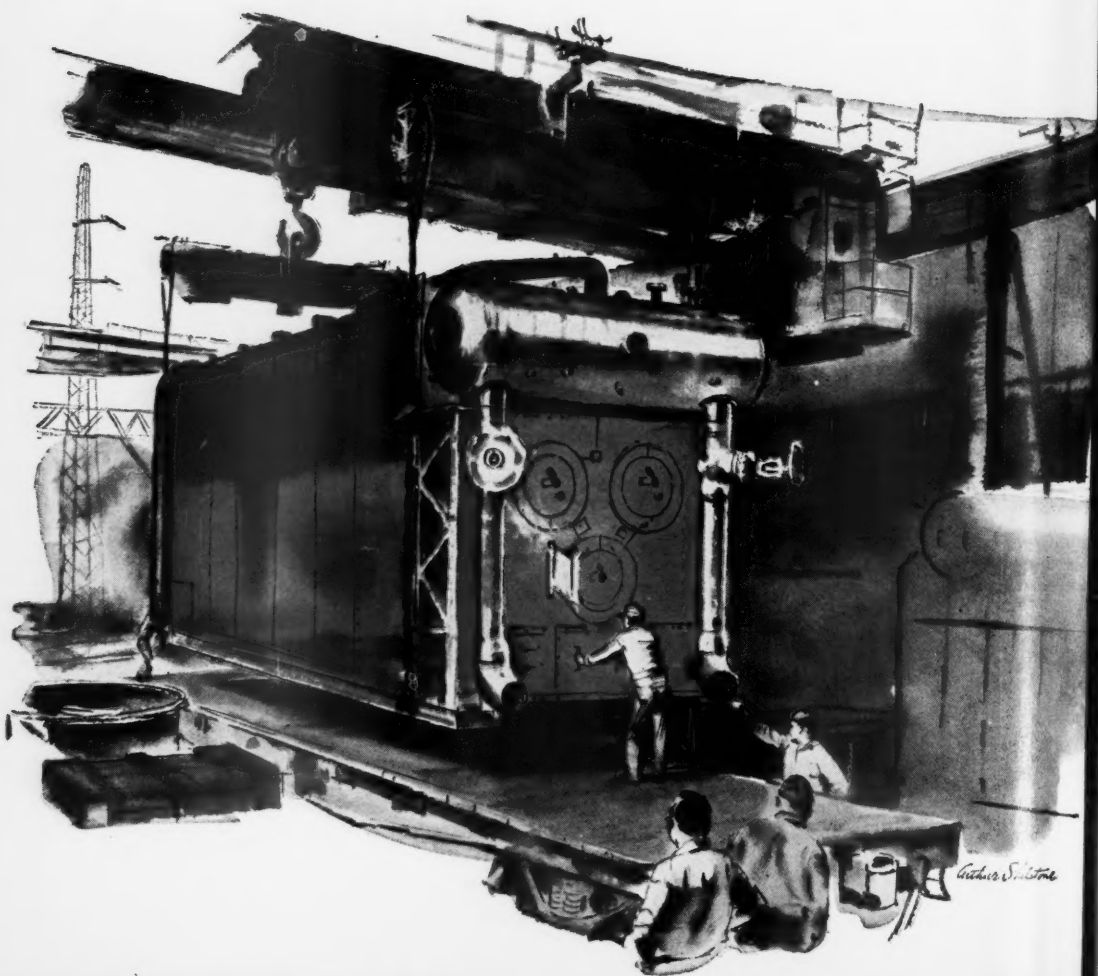
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The plant on the facing page is the Eddystone Station of the Philadelphia Electric Company. It contains a C-E Sulzer Monotube Steam Generator, a small portion of which is shown in the upper left corner of the drawing. Later this year, when this boiler is placed in service, it will produce steam at the highest pressure and temperature ever used in commercial power practice — 5000 lb per sq in and 1200 F.

Shown below is the world's highest-pressure "package" boiler — a C-E Controlled Circulation Unit — Type PCC. It is designed to produce steam at a pressure of 1800 psi and 1050 F. Now installed at the General Electric Company plant at Fitchburg, Massachusetts, it provides steam for special testing purposes.



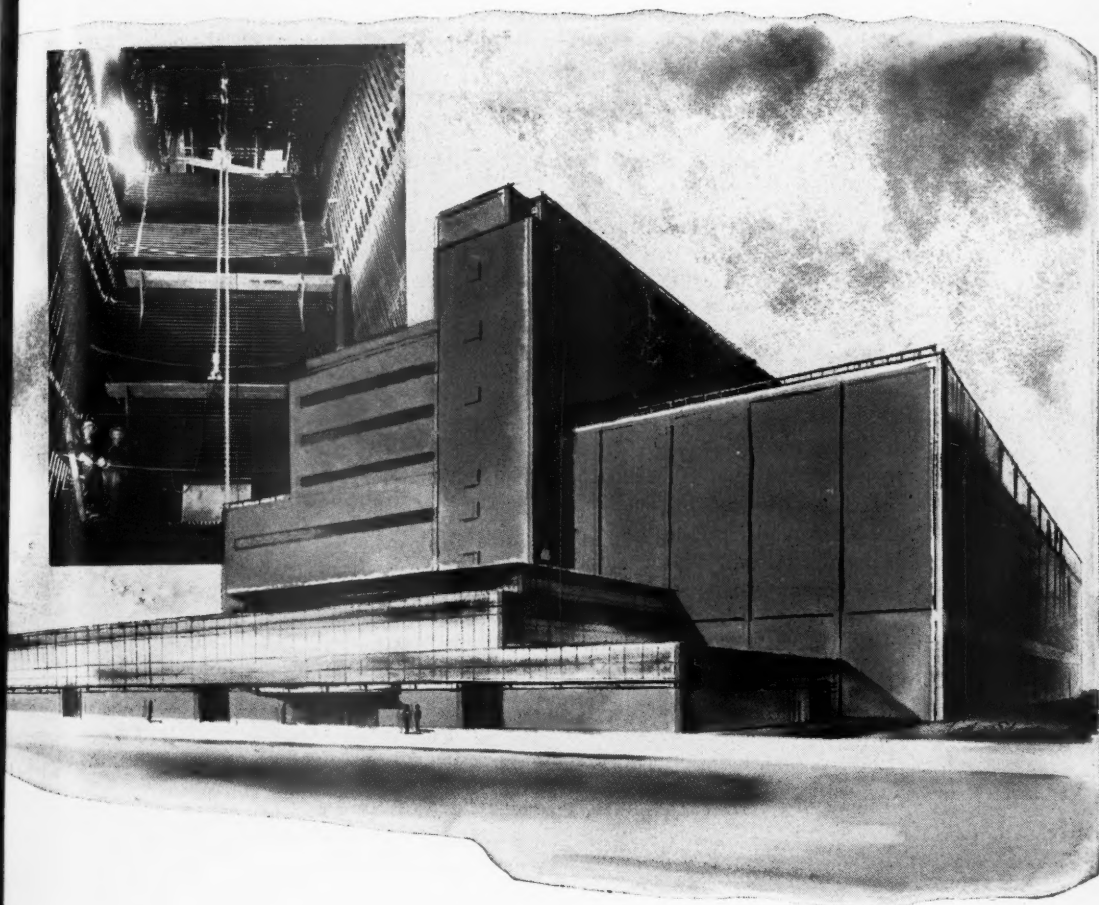
ALL TYPES OF STEAM GENERATING, FUEL BURNING AND RELATED EQUIPMENT; NUCLEAR REACTOR

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HIGH PRESSURE BOILERS by C-E

...or filling a Plant



The facts on the opposite page are of significance to you. They are part of the long list of C-E "firsts" — a list which includes the world's first boiler designed to produce as much as 3,850,000 lb steam per hour and the world's largest package boiler, which produces 120,000 lb steam per hour. They give further evidence that—even in the biggest sizes and in the highest pressure ranges—C-E offers the most advanced designs for all steam requirements and with all fuels. To date, 38 C-E units have been purchased to provide 2400-pound pressure steam—or above—at the cottles of turbine-generators that have an aggregate

capacity of about 8-million kilowatts. Fourteen of these units are already in service—one for a period of over three years.

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Pages with the Editors

WE were quite intrigued to note, in a recent news dispatch, that a privately owned and operated electric utility had decided to solicit bids from foreign manufacturers of generating equipment. Coming on top of the recent controversy over whether the Tennessee Valley Authority or other federal power projects should accept foreign equipment bids of this type, this brings the question of foreign imports in the electric manufacturing field into sharper focus.

OF course a number of other American manufacturing industries have been feeling the pinch of foreign competition. This has been especially noticeable in the increasing popularity and volume of sales of imported automobiles, in a domestic market which has been hitherto so heavily dominated by the American auto maker. There is also the complicated factor of our foreign aid policy and whether the rising volume of imports may be due to the weakening dollar in the international exchange.

ONE of the things critics of our foreign aid policy emphasize is the fact that such aid has built up foreign competition with American industry, notably in Western Europe. Such competition does squeeze some of our American industry, without a doubt. Both management and labor in Detroit and other American automotive centers are quite open in voicing concern.

A SIMILAR difference of opinion will probably arise with respect to less developed countries which now depend on the shipment of raw materials. But with so many countries now having an oversupply of such raw materials, lower prices are being posted resulting in a more favorable competitive position for imports and a less favorable position for American exporters.

It is quite true that the dollar has



ROLAND B. EUTSLER

softened in the exchanges of the world, for the reason that foreign claims against America have been increasing more quickly than American claims against foreign exchange. By buying more abroad Americans are expanding these foreign claims. By selling less abroad American claims against foreign exchange tend to diminish. But the problem of imports in connection with domestic American trade is one that can be met only in terms of domestic dollar competition. The days of tariff-protected monopoly in domestic markets are apparently run out. And there seems little disposition in Washington, under the prevailing political climate, for returning to them. Over the long run, however, American manufacturing industry, through volume production and other cost-cutting operations, should be able to hold its own. It always has done better than that, in bygone years.

MUCH depends, of course, on the success of the administration's drive to slow down, if not halt, the inflationary spiral which keeps tending to boost operating costs. And in this operating utilities as well as manufacturing industries have a very definite stake. Indeed, because of the pressure of rigid rate regulation the operating utilities probably are more vulner-

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A ready-to-roll workshop on wheels . . . that's this versatile Dodge Tradesman, and it puts to use every available inch of space.

There's pick-up load space aplenty, with a lockable sliding roof to protect whatever you carry. Lock-up compartments for weatherproof storage of tools, fittings and supplies. Even a handy workbench . . . when you swing down the horizontal compartment doors. Ladder racks available.

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able to the impact of inflation than the unregulated manufacturing industries.

IN this issue the opening article deals with a very sensitive and important market for the operating utilities—the money market. This article is the joint product of two members of the University of Florida faculty, who have combined their talents to give us an analysis of the capital market as it affects regulated utility industry. The conclusion seems to be that public utilities and railroads in the United States will still be able to make a greater contribution to our domestic economy at a dynamically increasing pace, if they are kept within the realm of private enterprise ventures, as distinguished from public ownership.

THE two joint authors are DRS. ROLAND B. EUTSLER and JAMES E. BROWN. A native of Danville, Virginia, DR. EUTSLER received his BS and MS in commerce from the University of North Carolina and his PhD in economics from the University of Pennsylvania in 1929. Before joining the University of Florida College of Business Administration as a professor of economics in 1935, DR. EUTSLER also taught at Washington and Lee University and the Wharton School of Finance and Commerce at the University of Pennsylvania. More recently DR. EUTSLER has accepted a teaching assignment in the Republic of Indonesia, under the sponsorship of the Ford Foundation.

PROFESSOR JAMES E. BROWN is a graduate of business administration at the University of Richmond. He received his master's degree in accounting from Michigan State University. He is in the process of completing the requirements for doctor of philosophy in economics at the University of Florida, where he also holds the position of full-time instructor in business administration.

* * * *

HAVE there been any recent developments in government planning or organization with respect to public utility industries in case of attack? Beginning on page 199 we have an article on this subject by HERBERT BRATTER, professional author of Washington, D. C. He has



JAMES E. BROWN

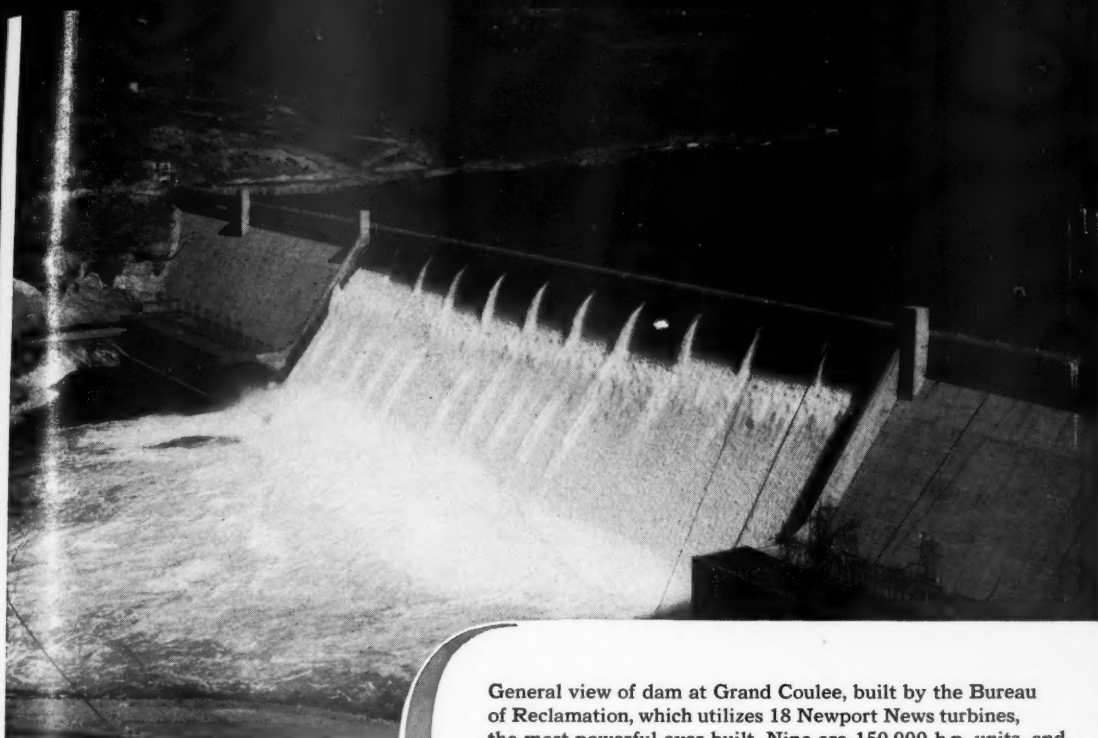
checked the latest available information on this subject in the Business and Defense Services Administration of the U. S. Department of Commerce. But one of the most interesting and important problems was the creation of an executive reserve and the decentralization of the same to avoid the serious consequences that might result in the event of a catastrophic enemy attack on the nation's capital.

* * * *

ALFRED M. COOPER, whose article on when and how utility executives should be retired begins on page 207, is now a professional writer of Indio, California. MR. COOPER was at one time educational director for a large publicly owned electric utility. Subsequently, he was associated with the management of an investor-owned utility company. Accordingly, he has had an opportunity to consider on a broad basis the problem of making proper provision for the retirement of utility executives, whether in publicly owned or privately owned utility operations. He points out, for example, that in any consideration of retirement schedules it is essential to bear in mind that wealth of experience which makes the executive of sixty or over valuable to his organization.

THE next number of this magazine will be out August 13th.

The Editors



General view of dam at Grand Coulee, built by the Bureau of Reclamation, which utilizes 18 Newport News turbines, the most powerful ever built. Nine are 150,000 h.p. units, and the other nine are rated at 165,000 h.p. each.

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Other equipment designed and built by Newport News includes penstocks, pressure regulators, valves, pumps, gates and rack rakes. Upon request, a copy of our illustrated booklet entitled "WATER POWER EQUIPMENT" will be sent to you.

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SHIPBUILDING AND DRY DOCK COMPANY
Newport News, Virginia

Coming IN THE NEXT ISSUE

(August 13, 1959, issue)



PROFESSIONAL ADMINISTRATORS AS REGULATORY COMMISSIONERS

This is a concluding study of a series of articles by Dr. Lincoln Smith of the faculty of New York University, dealing with the question of comparative professional backgrounds in the regulatory field. Through this series Dr. Smith has taken up in turn the suitability of professional training in law, engineering, accounting, and general business experience in equipping members of the regulatory commissions to perform their duties more capably and effectively. Dr. Smith has even examined the rôle of the nonprofessionalist. In this article, however, he analyzes a comparatively recent form of professional specialty—the administrative expert. He deals with the problem of the changing character of regulatory responsibility and on the whole rates fairly high the contribution of the professional administrator in the regulatory field.

THE RÔLE OF THE EMPLOYEE MAGAZINE

Virtually every utility company of any substantial size has developed an employee magazine. But such development has been characterized by a wide range of variety. Some cling to the gossipy, personal type of publication which relies heavily on promotions, anniversaries, marriages, retirements, and such vital statistics. Other company publications take the view that there is a responsibility to tell the employee more about the impact of current events on their company operations, including such matters as public ownership and taxes. E. N. Pope, director of advertising and sales promotion of the Carolina Power & Light Company, favors the latter view and tells why in this article about his company's very lively employee magazine, **The Spotlight**. Here is an objective appraisal of the rôle of one company employee publication.

ELECTRIC POWER AND CIVIL DEFENSE

Electric energy is the lifeblood of the industrial might of our nation. And so in the deadly game of survival posed by the cold war which could so grimly become a hot war, the electric power industry plays a vital rôle in meeting the challenge of the Communist bloc. Ralph V. H. Wood, director of defense of the Philadelphia Electric Company, has reviewed civil defense plans for emergency action in meeting civilian requirements in the event of disaster, including enemy attack. His article touches on the background experience of actual storm disaster, research, recuperative planning, and some final observations on what will be expected of the electric industry and what it is preparing to do in the unpleasant event of a hostile attack of major proportions.



Also . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.

R&S Standard Report

PEOPLES UTILITY COMPANY
BILL ANALYSIS - Commercial
PERIOD - Year 19 -

Kw. Hrs.	No. Bills	Consumption in Kw. Hrs.	No. Bills	CUMULATIVE Consumption in Kw. Hrs.	RATE- Consolidated Factor
1	1	100	1	100	1.0000
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3	3	300	3	300	1.0000
4	4	400	4	400	1.0000
5	5	500	5	500	1.0000
6	6	600	6	600	1.0000
7	7	700	7	700	1.0000
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99	99	9900	99	9900	1.0000
100	100	10000	100	10000	1.0000

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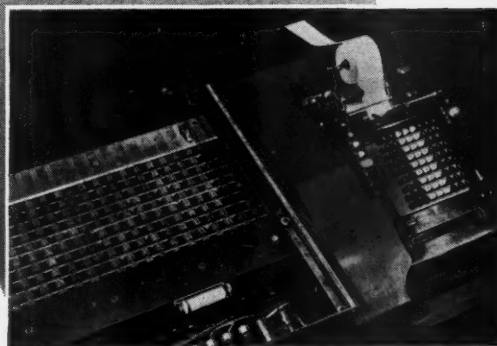
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Remarkable Remarks

"There never was in the world two opinions alike."

—MONTAIGNE

O. V. TRACY
*Vice president, Esso Standard
Oil Company.*

"The Kremlin planners are interested in electronics, not motorboats. They are interested in nuclear power, not power lawn mowers. They are interested in chemicals and missiles, not vacuum cleaners and dishwashers."

GEORGE CHAMPION
*President, The Chase
Manhattan Bank.*

"You have heard the saying, 'The world is full of willing people; some willing to work, the rest willing to let them work.' We have to disprove that saying. We can't featherbed; if anything we have to work harder and longer, make better products and relax less in the suburbs—and that applies to bankers, as well as to everyone else!"

S. C. HOLLISTER
*Dean, Cornell University,
College of Engineering.*

"What is there in this power situation that should receive the active attention of businessmen generally? Power is the energizing force of all industry. Control of this force by government operation affords a powerful entry by government into the remainder of the industrial activity of the country. Any act, therefore, on the part of business which condones expansion in the power field can well be an act which, in the end, will be inimicable to the business world, itself . . ."

HENRY FORD II
President, Ford Motor Company.

"While business has been politically active, it has not been effective because of its failure to generate broad participation by people in local politics. I suspect also that it has erred in identifying itself and its causes too exclusively with the extreme conservative viewpoint. It spends most of its time trying to convert the faithful; it has notably failed to appeal effectively to the large mass of independent voters and has almost totally defaulted in terms of making its influence felt within the moderate elements in both political parties."

SHERMAN R. KNAPP
*President, Connecticut Light &
Power Company.*

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atomic progress

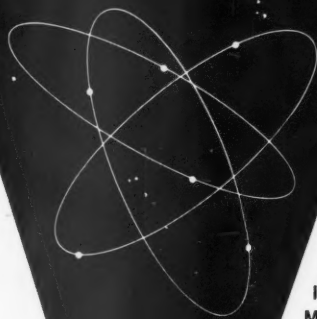
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In 1952 Pioneer joined with other groups, all reporting to the Atomic Energy Commission, for constant study of atomic energy application. Today Pioneer is qualified as a consultant to industry in the application of atomic reactor systems to the generation of electric power. Presently, Pioneer is acting as architect-engineer and supervisor of construction of the 66,000 kw commercial atomic power plant shown here. Allis-Chalmers Mfg. Co. is the prime contractor. Scheduled for 1962 completion, the plant, for the Northern States Power Co., will be known as the "Pathfinder".

Organized as Central Utilities Atomic Power Associates, these utilities will share in the research and development costs: Northern States Power Co., Central Electric and Gas Co., Interstate Power Co., Iowa Power and Light Co., Iowa Southern Utilities Co., Madison Gas and Electric Co., Mississippi Valley Public Service Co., Northwestern Public Service Co., Ottotail Power Co., St. Joseph Light and Power Co., Wisconsin Public Service Corp. **PIONEER SERVICE & ENGINEERING CO.**, 231 South La Salle Street, Chicago, Illinois

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Sketch of "Pathfinder"
commercial atomic power plant



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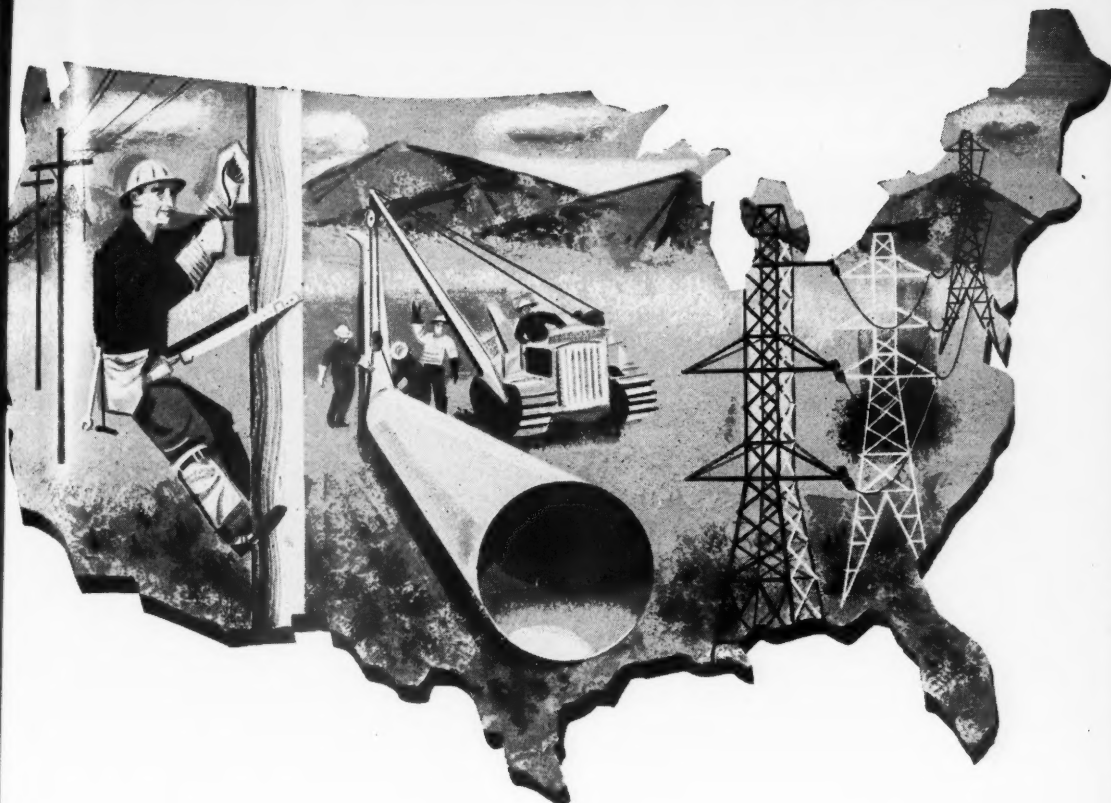
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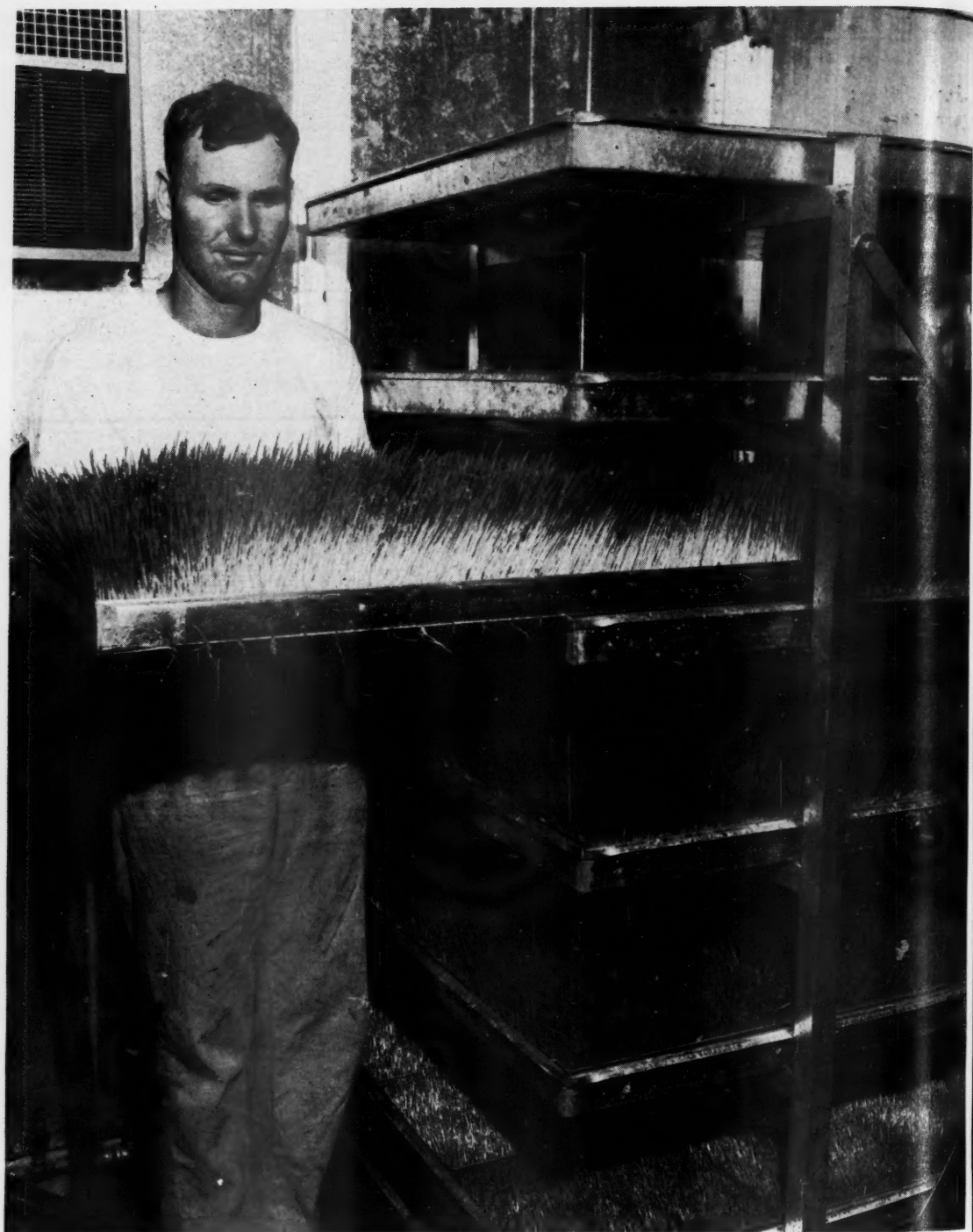
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UTILITIES

A.l.m.a.n.a.c.k

JULY—AUGUST

Thursday—30 <i>Northwest Shippers Advisory Board ends two-day meeting, Missoula, Mont.</i>	Friday—31 <i>Summer Communications Course will be held, Massachusetts Institute of Technology, Cambridge, Mass. Aug. 17-28. Advance notice.</i>	AUGUST Saturday—1 <i>Western Electronic Show and Convention will be held, San Francisco, Cal. Aug. 18-21. Advance notice.</i>	Sunday—2 <i>Annual Appalachian Gas Measurement Short Course will be held, Morgantown, W. Va. Aug. 24-26. Advance notice.</i>
Monday—3 <i>American Bar Association will hold annual meeting, Miami Beach, Fla. Aug. 24-28. Advance notice.</i>	Tuesday—4 <i>American Dietetic Association will hold meeting, Los Angeles, Cal. Aug. 24-28. Advance notice.</i> 	Wednesday—5 <i>American Institute of Electrical Engineers will hold petroleum industry conference, Long Beach, Cal. Aug. 25-27. Advance notice.</i>	Thursday—6 <i>Mid-West Gas Association will hold gas school and conference, Ames, Iowa. Aug. 26-28. Advance notice.</i>
Friday—7 <i>Eighth Utility Management Workshop ends, Harriman, N. Y.</i>	Saturday—8 <i>New Jersey Gas Association will hold annual convention, Asbury Park, N. J. Sept. 4. Advance notice.</i>	Sunday—9 <i>American School Food Service Association begins meeting, San Francisco, Cal.</i>	Monday—10 <i>Illuminating Engineering Society will hold national technical conference, San Francisco, Cal. Sept. 7-10. Advance notice.</i>
Tuesday—11 <i>American Water Works Association, Rocky Mountain Section, will hold annual meeting, Moran, Wyo. Sept. 8-10. Advance notice.</i> 	Wednesday—12 <i>Tennessee Telephone Association will hold annual convention, Nashville, Tenn. Sept. 9, 10. Advance notice.</i>	Thursday—13 <i>Pacific Coast Gas Association will hold annual meeting, Los Angeles, Cal. Sept. 9-11. Advance notice.</i>	Friday—14 <i>Maryland Utilities Association will hold annual fall conference, Virginia Beach, Va. Sept. 11, 12. Advance notice.</i>



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A real believe it or not is this electric grass incubator that enables a farmer to grow and harvest a fine crop of oat grass without soil under electrically controlled conditions of heat, light, and moisture.

Public Utilities

FORTNIGHTLY

VOLUME 64

JULY 30, 1959

NUMBER 3



Regulated Industries and The Capital Market

By ROLAND B. EUTSLER and JAMES E. BROWN*

As our population explodes, electric, gas, and telephone companies may reach an impasse in their efforts to obtain adequate funds for expansion. So long as utility earnings are stringently curbed by regulation, industrial securities will prove more attractive to investors seeking a higher return and price appreciation. Capital rates to utilities, already high, will go higher. More liberal rate adjustments by commissions seem urgently needed. Otherwise the enemies of free enterprise, subsidies, and government ownership may insinuate themselves deeper into our economy.

THE rapid growth in the population of the United States in recent years has been accompanied by an even more rapid growth in the production of goods and services. In numbers, since 1946, our population has increased by 30 million people to over 171 million people, an increase of over 20 per cent. Measured in dollars, our national income has in-

creased by \$179 billion to \$358 billion, an increase of 100 per cent. As a contributor to production of national income, public utility industries increased more than 200 per cent, or in amount, by \$8.5 billion to \$13.3 billion.

To the American people, this increase in goods and services represents an increase in the standard of living, a standard which is the highest in the world. This has been made possible by an increase

*Members of the faculty of the University of Florida. For additional personal note, see "Pages with the Editors."

PUBLIC UTILITIES FORTNIGHTLY

in productivity of all economic resources but particularly by an increase in the productivity of capital goods—in the machines used in our productive processes. This increase has been along two directions: by more machines and by technologically better machines. In either case, it has been possible for this to be accomplished only by an ever-increasing investment of capital funds in American business.

That public utility services have increased in output relatively more than has the economy as a whole is indicative of the importance of these services—electricity, gas, telephone, transportation—to the American people. In fact, they play a dual rôle: On the one hand, they are used in productive processes by other industries to contribute to their increasing output of goods and services, and, on the other hand, are used in ever-increasing quantities in the direct satisfaction of wants, witnessed by the increasing quantity of all these services in homes of American people. To attain this position, the public utility industries have had to make ever-increasing and relatively larger investments of capital funds.

ALL predictions indicate continued expansion of American industry and continued increasing importance of the public utility industries. One of the requisites of this expansion and growth is an increasing investment of capital funds. If the prediction for the increasing relative importance of public utilities in this growth is to hold true, these industries must year after year attract an even larger share of new capital funds than they have in past years. This means that

the future of the public utility industries is, short of governmental subsidy, dependent upon their ability to attract capital funds in the highly competitive capital market. It, therefore, becomes important to analyze the position of public utilities in this competitive market for investment funds.

This analysis examines the relative investment position of public utilities in comparison with other industries and any changes therein which might shed light on the ability of utility industries to attract the ever-increasing quantity of investment funds which will be needed to meet the increasing demands for utility services.

Capital Market Intensely Competitive

THE capital market to which public utilities must go to compete for their investment funds is a highly competitive market. It is characterized by an absence of subjective influences. Instead, all values in this market are reduced to a common denominator, our standard of pecuniary value, the dollar. In the consumer goods market, preferences for brands, styles, colors, and many other considerations, subjective in nature, are prevalent. In the labor market, weight is afforded to location, climate, social contacts, politics, and many factors other than a strict monetary element. In the capital market, however, only the dollar is considered, with, of course, minor exceptions such as the subjective desire to possess stock of a particular firm for sentimental reasons.

More elements of competition exist in the capital market than in most other markets. There is no differentiation of the product, for all dollars are alike. Dollars, moreover, have free mobility and move at

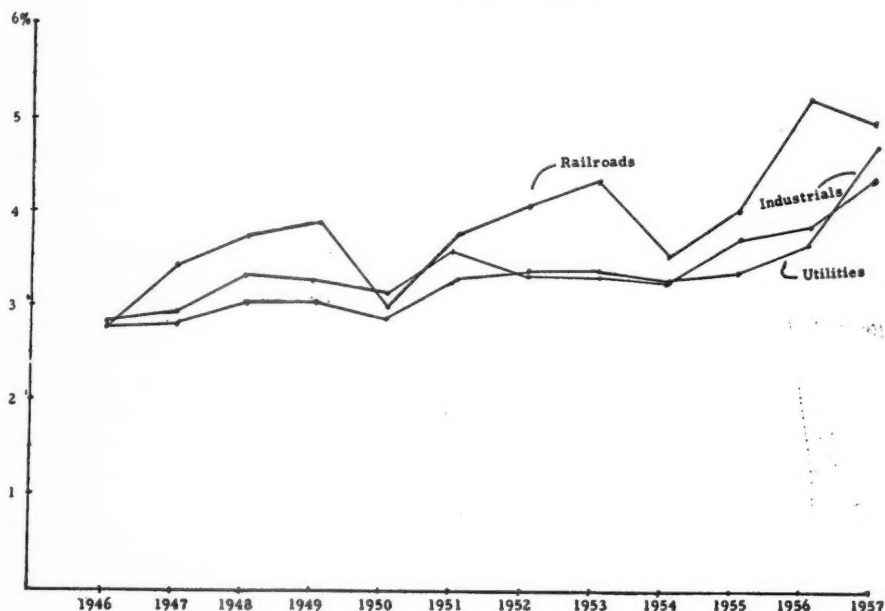
REGULATED INDUSTRIES AND THE CAPITAL MARKET

will to the location of the highest bidder. Dollars can be used for investment in productive facilities close at hand or far away, and climate, except as it affects production, is not a consideration in the com-

petition for funds. Moreover, the managements which will use the funds are considered in terms of their skill in production and not, as may be the case in a labor market, on the basis of their atti-

CHART 1

Average Cost of New Debt Capital



AVERAGE COST OF NEW DEBT CAPITAL*

Year	Public Utilities Per Cent	Industrials Per Cent	Railroads Per Cent
1946	2.73	2.77	2.73
1947	2.79	2.98	3.46
1948	3.09	3.31	3.64
1949	3.07	3.20	3.85
1950	2.85	3.14	2.98
1951	3.29	3.53	3.70
1952	3.38	3.35	4.08
1953	3.38	3.35	4.29
1954	3.17	3.30	3.53
1955	3.33	3.65	4.12
1956	3.86	3.86	5.25
1957	4.75	4.46	5.01

*Moody's Manuals of Industrials, Public Utilities, and Transportation.

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tudes and beliefs, and activities in human relations. It can also be said, of those competing in the capital market, that reasonable knowledge of market conditions is possessed by all. While there are elements of governmental controls in the capital market, such controls tend to strengthen the forces of competition rather than to soften them. In addition, the earnings of public utilities are regulated by government which of necessity affects their competitive position. The market itself remains highly competitive; only some of the participants in this game of competition are burdened with earnings controls.

Public Utilities and Railroads

FOR analysis of the relative position of public utilities and railroads in this competitive capital market, the time period, 1946-57, was selected, since this postwar period was one of growth and expansion. In comparing and analyzing the relative market positions of public utilities, railroads, and industrials, a time period extending back further than 1946 would involve the war years and analyses based upon such data would shed little light on conditions today. To consider data of the years prior to World War II would also be misleading since uniformity of reporting, SEC regulations, the Public Utility Holding Company Act, corporate income taxes, and effective regulatory control were largely products of the mid-1930's. The postwar period, nevertheless, marked as it is by an expansion of investment in American business, provides sufficient time to see how the market has considered various investment areas and whether this indicates what may be expected in the future.

Since the end of the last World War there has been a general rise in the cost of all debt capital, from below 3 per cent in 1946 to considerably above 4 per cent in 1957. While such a rise is significant as a measure of increasing cost for debt capital, *it also is significant if relative positions of certain industries result in a changed position in the market.*

Chart 1 shows that the cost of debt capital was slightly higher for industrials than for public utilities in 1946. Differences in market rates of interest are usually due to differences in degree of risk, and historically public utilities have been able to borrow funds at lower rates of interest than have industrials.

Some New Debt Capital Trends

THIS "spread" between public utility and industrial cost of new debt capital remained constant until 1951, after which time, due to the limitations on earnings allowed the public utilities and the relatively greater growth in earnings of industrials, the spread in the cost of debt financing shifted in favor of industrials. Although this trend was reversed two years later it was not long before the gap narrowed and 1957 found utilities again having to pay a higher cost for new debt capital. It is apparent, then, that the position of industrials has improved in relation to utilities. Stated in another way, it shows the inability of utilities to maintain their superior market position due both to the slowness of the regulatory processes in making adjustments and the amount of adjustment allowed in rates during this inflationary period.

Although there have been wider fluctuations in the cost of new debt capital for railroads which somewhat obscure the

REGULATED INDUSTRIES AND THE CAPITAL MARKET



CHART 2

Earnings Per Share of Common Equity



EARNINGS PER SHARE OF COMMON EQUITY*

Year	Public Utilities	Industrials	Railroads
1946	\$2.19	\$3.53	\$2.44
1947	2.16	5.32	4.22
1948	2.22	7.03	6.19
1949	2.36	6.60	3.67
1950	2.62	8.45	7.36
1951	2.44	7.37	6.66
1952	2.62	7.18	7.69
1953	2.78	7.71	8.08
1954	2.94	8.38	6.03
1955	3.21	10.51	8.51
1956	3.35	10.35	8.33
1957	3.41	10.27	6.79

*Moody's Manuals of Industrials, Public Utilities, and Transportation.

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trend, it is still apparent that their costs have also risen higher and more rapidly than have the costs of new debt capital for industrials. As long as utilities, and especially the railroads, continue to "trade on the equity" to the extent that they have in past years, then this increase in the cost of new debt capital is further emphasized in importance. The railroads have been squeezed out of the equity market and have relied exclusively upon the debt market for sources of new capital except as earnings have been retained as a source of equity capital. Accordingly, they have felt this upward pressure of cost even more than the utilities which, historically, have themselves relied upon debt financing to the extent of approximately 50 per cent of their capital requirements.

Equity Capital Straws in the Wind

IT is not conclusive that capital costs, in total, are higher priced by observing the changes in costs of debt capital alone. Every business must have some equity capital which bears the ultimate risks of the enterprise. Payments for equity capital are, therefore, as necessary and important as interest payments for debt capital, and both are considered costs of production. Therefore, the changes in the cost of equity capital, as it has affected the public utility industries and the railroads in relation to the cost of equity capital for industrials, must also be examined.

Equity capital investments are influenced by the prospects of earnings. Investors thus capitalize future earnings as a measure of the present value of their potential investment. The factor regarded as most important in the determination of future earnings is the record of past

earnings influenced by such things as the limitations on utility earnings imposed by regulation, prospects of peace (or war), the amiability of labor relations, and other forces which are likely to affect the future course of earnings.

As shown on Chart 2, utilities have increased their earnings per share of common equity from \$2.22 in 1948, to \$3.41 in 1957, an increase of only \$1.19 per share. Industrials fared much better, increasing their earnings per share of common equity from \$7.03 in 1948, to \$10.27 in 1957, an increase of \$3.24 per share, or almost three times the increase in earnings per share on utility stock. An examination of the increase in railroad earnings during this same period shows an even larger relative gain in the amount of industrial earnings. While industrial earnings rose \$3.24 per share the earnings of railroads rose only 60 cents per share. Thus, industrial earnings per share rose 5.6 times as much as did the earnings of railroad securities.

If these changes in earnings per share were related back to 1946, the rise in earnings in favor of industrials would be even more pronounced. A rapid and precipitous increase in the earnings of both industrials and railroads occurred immediately after World War II. Using 1948 instead of 1946, as we did, eliminates the effect of this expansion of industry as it emerged from wartime controls, as consumers unleashed a flood of purchasing power, and as emergency increases in railroad rates were granted.

Why Utility Earnings Lag

A MAJOR reason for the failure of utilities to increase their earnings as much as have industrials is the stringent

REGULATED INDUSTRIES AND THE CAPITAL MARKET

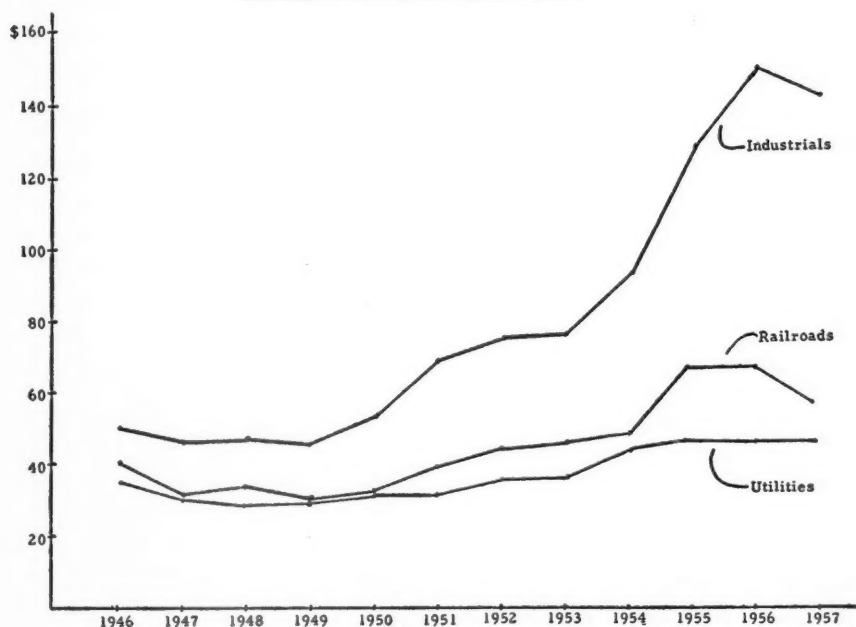
control over earnings exercised by regulatory commissions. If this continues, the ability of the utilities to attract equity capital funds will be even more impaired. Commissions recognize this problem and though some have granted a limited meas-

ure of relief, there appears little reason to anticipate drastic changes in regulatory policies in the immediate future. One relief measure advocated to offset the limitations on earnings is a change in the base on which the rate of return is allowed.



CHART 3

Market Price Per Share of Common Equity



MARKET PRICE PER SHARE OF COMMON EQUITY*

Year	Public Utilities	Industrials	Railroads
1946	34.05	49.84	41.48
1947	29.53	46.10	31.22
1948	27.34	47.50	34.23
1949	28.37	46.88	28.55
1950	31.23	57.83	33.60
1951	32.55	70.72	40.72
1952	35.48	75.63	46.35
1953	37.80	76.05	47.48
1954	44.30	95.81	51.33
1955	49.24	130.66	70.21
1956	49.62	149.41	71.56
1957	49.42	143.65	59.51

*Moody's Manuals of Industrials, Public Utilities, and Transportation.

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Also, as an offset, utilities have argued hard for the inclusion in the rate base of plant and facilities under construction but not yet rendering service. Similarly, utilities have made many pleas for "attrition allowances," replacement depreciation, and other forms of price-level adjustment.

RAILROAD and public utility securities historically have experienced greater underlying stability of earnings than have industrials which helped them to maintain a favorable position in the equity capital market. As conditions change, however, and particularly as influenced by rising price levels in the past decade, stability of earnings must give way to an increase in earnings if this favorable position in the market for equity capital is to be maintained.

In some way commission regulatory policy must recognize the need for increased earnings if it is to aid the public utilities in meeting some of the risks caused by a rising price level and thus help them regain and hold a position in the capital market which lets them compete for funds without handicap.

Railroads, however, may not be helped appreciably even by regulatory recognition of the need for increased earnings. The major problem of the railroads is their failure to share in the general growth and expansion which has taken place in the economy. The increase in transportation has been taken in major part by other forms of transportation enterprises and by an enormous expansion in private transportation. Consequently, readjusting the railroad plant to conform with its share of total traffic or in some way increasing its share of total traffic is necessary to enable it to regain a com-

petitive position in the equity capital market.

CHART 3, a graph of market prices per share of common equity, shows the reaction of investors to the changes in earnings per share of stock. Both the absolute and relatively larger increases in earnings of industrials are reflected in the market prices of their security issues. The uncertainties inherent in predicting future earnings of railroads account for the erratic behavior of their market prices.

The market price of industrials rose 190.2 per cent during the period, 1946-57, a rise almost equal to the rise of 190.9 per cent in earnings per share during this same period. This substantiates the high correlation existing between past earnings and the capitalized value of anticipated future earnings, or market price. This correlation, however, did not hold as true for utilities since the market price of utility stocks rose 45.1 per cent during the twelve years examined while earnings rose 55.7 per cent during this same period. This indicates that investors have not only recognized the earnings advantages of industrials but also fear that the gap between industrials and utilities will widen in the future, a fear evidenced by the failure of the market price of utility issues to rise in proportion to the rise in earnings.

Profits Attract Capital

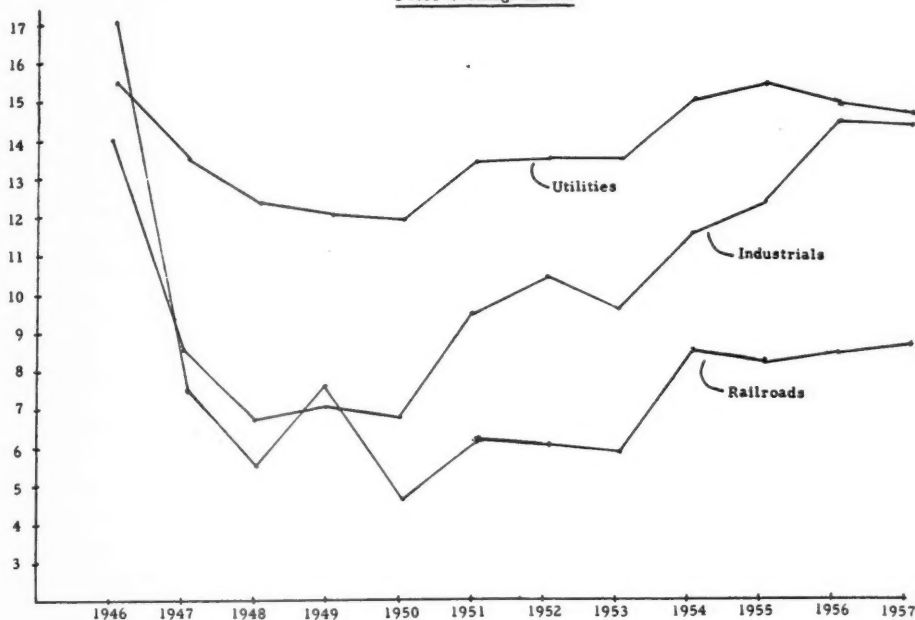
MONEY and those areas of business activity which result in the largest monetary return or profit seem to have a close affinity for each other. The business which offers the highest reward commensurate with a recognized degree of security attracts on favorable terms the

REGULATED INDUSTRIES AND THE CAPITAL MARKET



CHART 4

Price-earnings Ratios



PRICE-EARNINGS RATIOS*

Year	Public Utilities	Industrials	Railroads
1946	15.55	14.12	17.00
1947	13.64	8.67	7.40
1948	12.32	6.76	5.53
1949	12.02	7.10	7.78
1950	11.92	6.84	4.57
1951	13.34	9.60	6.11
1952	13.54	10.53	6.03
1953	13.60	9.86	5.88
1954	15.07	11.43	8.51
1955	15.34	12.43	8.25
1956	14.81	14.44	8.59
1957	14.49	13.99	8.76

*Moody's Manuals of Industrials, Public Utilities, and Transportation.

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funds it seeks in the capital market. In general, the ability to offer a high reward arises from the greater profits being earned.

Historically, and for this perfect reason, funds were drawn successively into banking, insurance, railroads, iron and steel, oil, automobiles, public utilities, motion pictures, chemicals, investment trusts, and, more recently, the manufacture of airplanes and the development of air transportation. As additional funds were invested in the fields of transportation and public utilities, the rate of profits in these fields gradually decreased toward the average of older, more established industries.

Historically, funds have found their way into industries where profit possibilities are brightest. Currently, investors are impressed with profits and profit potentials of industrials and are more willing to invest funds in this direction as evidenced by the rise in the market price of industrials relative to the rise in price of utility and railroad issues.

The ratio of market price to earnings has long been considered an important and useful tool for investment analysis. In general, the higher price-earnings ratio stocks are those whose earnings prospects are good, giving rise, naturally, to an increased desire on the part of investors to enjoy these earnings by purchasing such stocks.

IN the cases of many dynamic speculations, however, even the high-leverage ones, the possibility of large gain attracts enough investors to cause a moderately high ratio of price to probable earnings. Although there is no way of determining to what level irrational forces may propel

the price of a stock, clearly discernible relationships between market price and earnings do prevail. Relatively high ratios are typical of issues representing strong, well-established firms and also those which are still in the process of growth. Conversely, stocks of companies with less favorable earnings records and of firms engaging in less dynamic activities tend to sell at lower price-earnings ratios. This contrast is emphasized in Table 1 (page 195), which shows two groups of stocks; one group sells traditionally at high and the other at low price-earnings ratios.

It is shown on Chart 4, a graph of price-earnings ratios, that Moody's composite of 40 utilities in 1948 brought a price 12.32 times earnings, while industrials brought a price 6.76 times earnings, and railroads brought a price 5.53 times earnings.¹ Ten years later utilities were bringing 14.49 times earnings, or an increase of 9.5 per cent. In 1957, railroad stocks were bringing 58.4 per cent more per dollar of earnings than in 1948. Industrial issues, however, brought a price 13.99 times earnings in 1957, an increase of 108.4 per cent over the amount received per dollar of earnings in 1948. This indicates that utility and railroad issues, in relation to industrial stocks, have fallen drastically in investor preferences as to quality and future potential.

Utility and Railroad Plights

FROM Moody's composites of 100 industrials, 40 utilities, and 25 railroads, from which the bulk of the data was obtained, it has been shown that public

¹ Nineteen hundred and forty-eight was chosen again as the starting point for this particular analysis in order to avoid the effects of the unusual rise in earnings of industrials and railroads in the two-year period immediately following World War II.

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utilities and railroads are in a worsening competitive position in the capital market, as evidenced by the higher cost of new debt capital, the relative decline in earnings, the relative decline in market prices of equity issues, and a declining price-earnings ratio.

IN the postwar years, to keep pace with its increasing share of national income produced, investment in new plant and equipment by the gas, electric, and telephone utilities has more than doubled. New money financing has been at an amount in excess of \$2 billion every year since 1950, increasing to more than \$4.5 billion per year in 1957 and 1958. Each kind of major public utility predicts a continued need for new plant and equipment at an accelerating rate. Assuming a need for such new capital at \$3 billion annually (most predictions are for amounts greatly in excess of this figure), it follows that utilities will be active in the capital markets and bidding for a substantial proportion of the available new investment funds. To attract this capital, they must offer a reward commensurate with that

which can be received from alternative investments.

It follows that the utilities will be unable to make equal competitive offers for new capital unless their rate of earnings increases. The alternative, as has been taking place during the past twelve years, is an increase in the cost of capital—represented by higher interest rates on debt capital or lower prices received for equity securities. These increasing costs, as costs of production, must ultimately be borne by the users of the utility services. As a matter of policy, it would be better to recognize the need for increased earnings. If this is done, it means that utilities will be in a better financial position to meet the increasing demands for their services. If this is not done, the poorer and likely worsening financial position of these industries will not only result in higher rates generated from higher capital costs but also may cast doubt upon their ability to attract the capital needed for expansion.

Rise in Cost of Debt Capital

IN this paper we have shown how the cost of new debt capital for utilities



TABLE 1
COMPARISON OF PRICE-EARNINGS RATIOS

Name of Company	Fitch Stock Ratings	Average Earnings 1956-57	1958 High Price	Recent Market Price	Price-earnings Ratios On 1958 High	On Recent Price
Group I						
DuPont de Nemours ..	A	\$8.33	\$214	\$241½	25.7	29.0
International Bus. M. .	A	8.88	552	503	62.2	56.6
Allied Chem. Corp. . .	BBB	3.89	101	99	26.0	25.5
Eastman Kodak	BBB	4.99	154	141	52.6	52.2
General Electric	BBB	2.65	80½	78	30.3	29.4
Minn. Ming. & Mfg. ..	BB	2.32	122	121	30.9	29.3
Group II:						
Western Auto	BB	1.94	25½	25	13.2	12.9
Ill. Central R.R.	B	5.43	55½	51	10.2	9.4
Lerner Stores	B	2.08	21½	21	10.3	10.1
Southern Pacific	B	6.09	70	65	11.5	10.7
United Air Lines	B	3.22	37½	35	11.7	10.9
United Artists	CC	2.98	27½	25	8.1	7.3

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and railroads has risen faster, and higher, than has this element of finance cost for industrials. This rise in debt cost particularly affects the public utility industries which have characteristically "traded on the equity" as a means of paying a higher return on the equity capital than the rate of return allowed by regulatory commissions.

Debt capital comprises about 50 per cent of the capital structure of public utilities and if future financing continues to rely as much on debt capital, our conservative assumption would mean \$1.5 billion new debt each year. Utilities experienced an increase of almost 0.9 per cent in the cost of debt capital from 1956-57 which, applied to the assumed new debt capital, means an annual increase of \$1,350,000 in interest charges. Railroads are in an even poorer position. It has been some years since they were able to engage in any new equity financing and have relied exclusively upon debt financing for new capital.

Equity Financing

NEXT, it was pointed out how public utilities and railroads have encountered increasing difficulties in their attempts to compete for equity capital. An analysis of earnings, market prices, and the interrelation of earnings and market prices indicates that utilities are finding it more costly to engage in equity capital competition, compared with the relative ease with which industrials have been able to finance their equity issues.

The most frequently heard argument refuting the claim that utilities are encountering increasing difficulties in equity financing is that they have obtained equity capital when necessary and that as long as

certain investors are willing to invest in utility issues, utilities can continue to obtain equity funds without the regulatory agencies' recognition of the decline of their competitive ability in the capital market.

Nothing could be further from the truth. Utilities have had little trouble in marketing their equity securities, but only at relatively higher costs. The factor underlying this relative increase in cost of capital is the earnings position of utilities in relation to changing price levels. Continuation of this changing position, though not apparent from year to year, but clearly discernible in the whole postwar period, will give less and less protection to current investments. Moreover, the investors who entered the utility field some years ago, contrary to their expectations at time of investments, are finding their long-run position to be far less favorable than that of similar investments in industrials.

An Impasse Looms Ahead

THIS decline in the competitive position of utilities in the capital markets, both equity and debt, would not be as serious were these industries presently operating with a capacity sufficient for both present and future demands. We have pointed out, however, that public utilities will be called upon for tremendous growth in capacity and quality to serve the demands of the growing population and expanding industries. Railroads, too, will need new capital to continue the necessary modernization of their plants. Consequently, we are fast approaching an impasse, where utilities and railroads must expand to provide needed and desirable public services but must compete for the wherewithal for such expansion under the

REGULATED INDUSTRIES AND THE CAPITAL MARKET

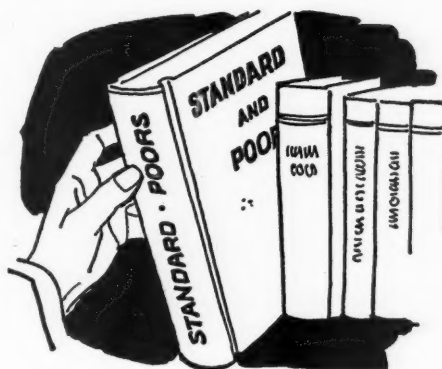
handicap of an increasingly unfavorable competitive position.

There appear to be but three possible means of averting this difficult impasse. The first, and one which no doubt has been tried and will continue to be diligently pursued, is a reduction of costs of production. If it is possible for utilities and rails to cut their costs appreciably, then earnings may well be improved, a factor of great importance in keeping the cost of financing low. Electric utilities, for example, have reduced costs by reducing the quantity of coal required for the generation of one kilowatt-hour of electricity. Although we are confident that, in our economic system, all industries attempt to achieve maximum efficiency in operations, there are limits to further substantial reductions in costs by operational efficiencies and technological advances. Thus, to expect public utilities and railroads to reduce operational costs as the cure-all for their declining competitive position in the money market seems unrealistic.

THE second alternative available to public utilities and railroads lies in rate adjustments. In the absence of further significant declines in operating costs, increases in rates are another way to provide sufficient earnings to enhance the attractiveness of utility and rail stocks and bonds for potential investors. Attempts to increase rates meet with resistances. The existing regulatory standards of reasonable rates tend both to slow the process of rate adjustment and to put limits upon the level of upward adjustments. Even when regulatory authorities are sympathetic to and sanction rate increases, conditions may be such that an increase cannot be made. For example, in recent

general rate increases granted railroads, some rates could not be increased because to do so would result in a shifting of traffic to other kinds of carriers. To some degree, prices of substitute products or services limit the ability of public utilities to increase rates as illustrated by the competitive price and rate relation among coal, petroleum, electricity, and gas as sources of power. In evaluating proposals for increases in rates, regulatory authorities should consider more carefully, however, the needs of utilities for increased earnings which are necessary if the utilities are to re-establish and maintain a favorable competitive position in the capital markets.

As a third alternative, either in the absence of adequate earnings or as a matter of public policy, public utility and transportation services can be provided by means of subsidy or by government ownership. In recent years, some urban transit facilities have been subsidized or taken over by local governments as a means either of keeping rates low or to keep these agencies in operation in the absence of sufficient earnings to cover costs. Currently, deficits experienced in providing



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commuter rail services have led some people to advocate subsidy to keep these services in operation. In the area of electric power, policies initiated in the mid-1930's have expanded into an overwhelming governmental program of electric power generation.

THE transportation and public utility industries are essential and basic industries in our economy. Their significant contribution to economic development and their anticipated continued contribution insure that these industries will be provided by either public or private capital. It is under a system of private capital that our economic growth has taken place and it is under a system of private capital that the transportation and public utility industries have made their contributions to our economic growth.

It is our firm conviction that the continued contribution of the transportation and public utility industries will be greater under private than under public ownership and operation. And such contribution will be needed in increasing amount if these industries are to meet the increasing demands of a growing population and expanding economy.

Essential to the private capital system is the payment of rewards or returns to all productive resources—to the natural resources, to the labor, to the management, and to the capital used in produc-

tion. It is the ability to reward or pay a return for capital which is today the most pressing need of the transportation and utility industries. Natural resources used in these industries have their prices or returns fixed on a competitive market and receive as much in these as in other industries.

SUCH also is the case for the wages of labor and for the salaries of management. But this is not so for the earnings available for reward or return to capital. Instead, the level of earnings to attract and reward capital is fixed under a system of regulation. This fixing of earnings, we find, has in effect imposed a limit on earnings, a limit which is low, we further find, in comparison with the level of earnings in other segments of the economy.

The consequence of this, as our analysis shows, has been that these industries have experienced a gradual increase in capital costs relative to capital costs of nonregulated industries. It is this worsening position in the capital markets which we consider imposes a serious threat to their future. It is our conviction that regulation must relax the limits on utility and transportation earnings to the point where their prospects of earnings result in their ability to attract capital for continued expansion and to follow the tenets inherent in a capitalistic society.

"THERE is a wide difference between unlimited majority rule and democracy, as that term has been generally understood in America. . . . It is worth remembering in this collectivist age that under the United States Constitution and other law there are a great many things which no majority, however large, may legally do."

—WILLIAM HENRY CHAMBERLIN,
Columnist.

In Case of *Attack*

By HERBERT BRATTER*



It has been assumed that modern weapons will not permit government, in time of attack, to move from Washington to dispersal locations. Plans formulated in 1956 have thus been revised. Now the country is divided up into eight Office of Civil and Defense Mobilization regions with no central government. Here we examine three aspects of this new plan in terms of what it will mean to public utilities such as electric power, gas, telephone, and communications companies.

THE National Defense Executive Reserve of the Business and Defense Services Administration of the U. S. Department of Commerce now numbers more than 1,000 businessmen, including a great many officers of telephone and telegraph companies and of companies manufacturing communications equipment. All along the BDSA has been using a certain number of businessmen as WOC's—without compensation—to give them some training in the ways of government. The 1,000 and more businessmen in BDSA's National Defense Executive Reserve will, in the event of a national emergency, automatically become government employees—part and parcel of

BDSA's staff, the moment they report for duty.

These 1,000 picked executives representing major United States industries are part of an organization composed of experts in many lines who have been and still are being enrolled by some 16 federal agencies for emergency duties. Public utility executives, fewer in number, have been assigned major rôles in the Interior Department's emergency plans, as described below. The Interior Department's emergency authority includes power, gas, and other fuels.

ABOUT half of BDSA's reservists have had no previous government service; others worked with the War Production Board or the Office of Price Administra-

*Economist and author of business articles, resident in Washington, D. C. For additional note, see "Pages with the Editors."

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tion or have had tours of temporary duty as Commerce Department WOC's. The reservists are fully instructed on their duties in the event of a national emergency and carry their "orders" with them at all times. In 1958 BDSA reservists attended a series of regional meetings in connection with Operation Alert. In May, 1959, they had their first full-dress national conference in Washington, a two-day gathering at which they were brought up to date on the BDSA's mobilization planning in the industrial field and the part they would be expected to play if called to active duty. The communications industries reservists, for example, had special sessions with BDSA's communications industries division, where there were discussed such topics as: plans for expeditious use of inventories, consumption of critical materials, government communications responsibilities, the defense materials system as a control mechanism, the stand-by communications order under limited war, the government's mobiliza-

tion planning organization, availability of BDSA records at emergency regional headquarters, etc.

Reservists Carry Orders with Them

EACH BDSA reservist is being offered a provisional postattack appointment and provided with a civil defense identification card, a postattack responsibilities card, and a pocket-size *Post Attack Manual*. The provisional appointment will become effective only (1) upon proclamation of a civil defense emergency or upon an attack upon the United States and (2) upon the reservist reporting for duty at his assigned duty station. Prior to the fulfillment of the above conditions he will not become an officer or employee of the United States. The card designates the proper holder as a direct representative of the Administrator of BDSA or its successor agency in the performance of its functions under the Defense Production Act of 1950, as amended, and any other emergency authority.

THE reservist is instructed: "In the event of attack on the United States which prevents communication (1) between you and the national headquarters of BDSA, or its successor agency, (2) between you and the regional production director of BDSA, or its successor agency, for the region in which you are located, and (3) between you and the regional director of the Office of Civil and Defense Mobilization, or its successor agency, for the region in which you are located, you will report to the federal, state, or local government official having authority in the area in which you are located. You are hereby authorized to travel at such time at government expense and be entitled to all priorities for travel, gasoline, etc., which may be provided for federal employees."

The card further instructs the reservist, once he has arrived at his post and pending receipt of instructions from OCDM or BDSA, to: "utilize your industrial experience and managerial skills together with your Executive Reserve training to

maximize human survival and to assist in the recovery of your community and country under the direction of the federal, state, or local government official in charge."

In time of emergency the reservist, it

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should be noted, proceeds to the nearest regional headquarters, meaning the one nearest to where the reservist happens to be at the time and not necessarily that nearest his company's offices. This means the nearest Civil Defense Emergency Operating Center.

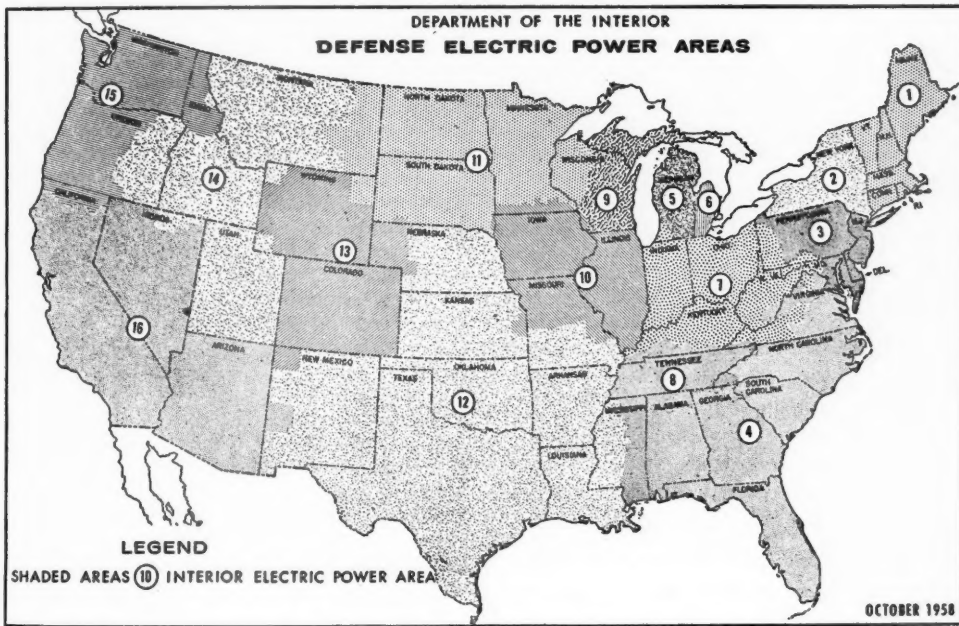
Manual Guides Reservists

THE manual provides general guidance for executive reservists in the event that disruption of communications and transportation renders it temporarily impossible to make federal government direction effective. Much is necessarily left to the individual judgment and initiative of the reservist. The emergency envisaged in this nuclear age differs greatly from all past experience; hence, in addition to the top priority for weapons, equal importance is assigned to the use of re-

sources for human survival and restoration of public utilities and services.

In the civilian area priority is to be given to the rehabilitation of damaged survival-item manufacturing plants, the delivery of production materials for the manufacture of survival items and the restoration of public facilities. Within this group, however, the levels of relative urgency will vary according to the effects of the attack on different communities. The relative priorities will be decided in each case by the community government. The reservist, therefore, must seek out that government to ascertain the relative needs. Once the immediate crisis has passed, it is expected that the reservist will receive specific directions from the federal production agency.

When the reservist reports to the nearest Civil Defense Emergency Operating Cen-



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ter, his arrival is made known to the OCDM regional headquarters. Pending instructions from that headquarters, the reservist is to advise and assist the local center on all production activities, including assessment and reporting of industrial damage and capability, industrial inspection and canalization, production expediting, materials distribution, and inventories.

THE manual lists seven objectives to which the reservist is to devote himself and use any priorities, allocation, and related powers which may be delegated to him. These objectives relate to the provision of materials, supplies, and equipment to produce survival items, maintain transportation, communications, electric power, fuels, and other facilities, etc.; required military items, AEC requirements, emergency facilities, and similar essentials.

The reservist is further instructed to use his delegated authority to assist in accelerating the operations of productive facilities and to assure maximum utilization of products and materials in the production process to meet local needs as determined by the Civil Defense Emer-

gency Operating Center or other duly constituted authority, which moreover will have the responsibility for the distribution of finished manufactured products.

Emergency Regulations

It is planned to put into effect in a post-attack emergency a series of emergency regulations and delegations of authority, listed in the manual, even though communications are disrupted. For such contingency BDSA regional production representatives have been provided with copies of the stand-by emergency regulations and have been delegated the authority to act for the Administrator of BDSA and to exercise the priorities and allocations powers and related powers of the latter.

Service in the National Defense Executive Reserve Entirely Voluntary

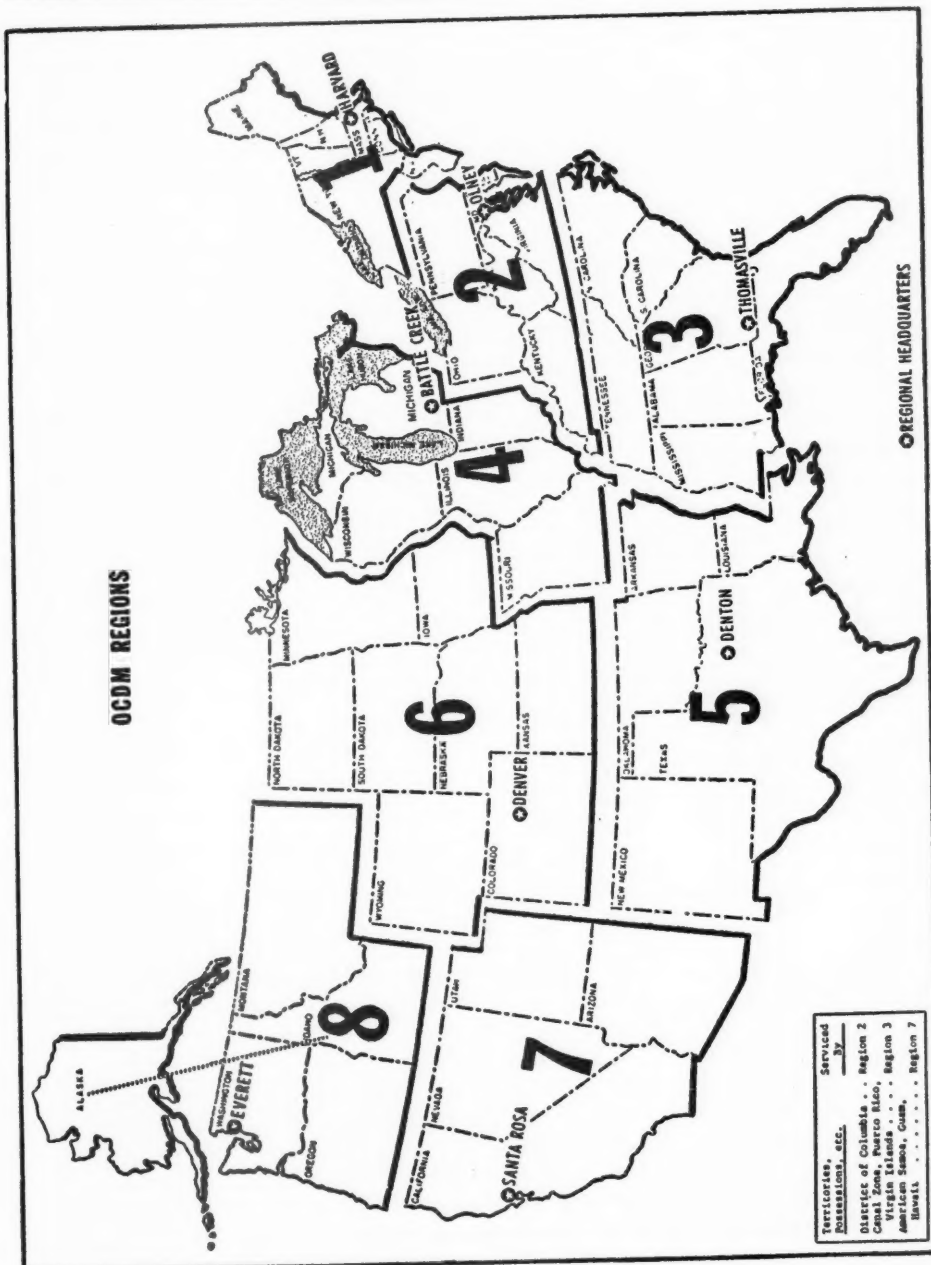
RESERVISTS are drawn from all segments of the civilian economy by the various departments and agencies, as authorized by the OCDM. There is no limit on the number of reservists. Those serving the BDSA are expected ultimately to approximate 1,500. Persons with a record of executive ability in production or business are chosen.

ALTHOUGH accepted for the reserve, an invitee is not required to serve, should he or his firm have changed its mind. Security clearance including fingerprinting is required. The reservist must agree to attend a training course at least once a year, must make himself immediately available in the event of a national emergency, and must notify BDSA promptly of any change of his status affecting his availability. He must also have the agreement of his employer as to his availability for the duties undertaken.

The required training consists of two briefing sessions a year, of not more than two days each. A few reservists may be invited, with their permission, to partici-

pate in one relocation exercise a year for a period not to exceed one week. Training initially is for assignments to positions in general mobilization functional areas,

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rather than for specific jobs. But a degree of earmarking for specific jobs will have to be undertaken.

BDSA reservists in training get no compensation. Unlike WOC employees, reservists do not advise or act on matters pending before the government in peacetime.

Nor are reservists required to file statements concerning their financial interests. Moreover, by Executive Order they are exempted from the so-called conflict-of-interest laws.

A WOC employee may also be a BDSA reservist, but he would not ordinarily be

designated as a reservist until completion of his WOC tour of duty. Generally an executive reservist cannot simultaneously be a military reservist. Under unusual circumstances exceptions may be made.

In selecting reservists the BDSA endeavors to avoid excessive demands on a single employer. If a reservist changes companies, he must advise BDSA and his new employer's consent for his continued participation in the executive reserve will be essential.

IN case of a World War II or "Korean" type of emergency, the reservist in all likelihood will be assigned to the national headquarters of the emergency production agency; *i.e.*, the BDSA.

The accompanying map (page 203) shows the location of the directors of the eight regional OCDM offices and of the corresponding BDSA field offices. The map shows the areas embraced in the eight OCDM regions.

BDSA, it may be noted, has been a leader among government agencies in its development of the executive reserve program and recruitment for it.



Interior Department's "WOC's"

THE Interior Department, which is responsible for the operation of the electric power, gas, and certain other industries in the event of a national emergency due to attack, unlike the BDSA, has no executive reserve. By the end of the year it expects to have one for gas. On electric power emergency planning it is presently using about twenty men from the industry on a WOC basis. Each of the country's 16 defense electric power areas will be run by an area director and all but one of these directors will be WOC's. The other is a government official. Interior's aim is to have a roster in depth; *i.e.*, three or four men standing by for each top area post. Hence, the goal is to expand the present list of twenty men to one of about sixty. The WOC's are presently working part time, but are on a stand-by basis for full-time government service in the event of war.

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Unlike the BDSA executive reserve, the electric power WOC's are expected to report—in case of attack—only to the particular DEPA localities to which each has been assigned, not to the nearest OCDM regional office. Once on the job, each area director will work with the utilities in his area.

Upon notification of a national emergency or attack on the mainland the area directors become full-time government employees, subject to the direction of the Secretary of the Interior or the DEPA Administrator. Each area director will be in full charge of all utilities in his area. He must take all action he considers necessary to maintain essential power service.

EACH defense electric power area will have, in addition to an area director, a deputy director, alternate directors, and a power utilization consultant. The latter is an executive from a utility which has a primary responsibility for transmission and distribution of power. Intermittently he advises and consults with the area director and the Interior Department on plans prepared preattack to alleviate power shortages and related matters. Post-attack some power utilization consultants are expected to become employees of the national headquarters office.

At present the Interior Department is in consultation with the area directors concerning a draft *Emergency Operations Handbook*. The handbook will, inter alia, describe in considerable detail the functions, policies, and procedures of the Defense Electric Power Administration, the preattack responsibilities of the area directors, liaison with utilities, a preparedness program for utilities, etc. It will also contain the names, addresses, and phone

numbers of all area directors, deputies, and alternates and power utilization consultants.

Telecommunication Priorities

IN a future national defense emergency, as in past ones, in the communications industry priorities will apply both as to the supplies, equipment, and man power essential to its operation and as to the use of telecommunication facilities by the government, industry, business, the general public, and others. The legal groundwork for the emergency is contained in Defense Mobilization Order IX-4, as published in the *Federal Register* of November 20, 1958. Annex 3 of DMO IX-4 deals with procedures for obtaining domestic (common carrier) telecommunication service during, or for use during, a national emergency.

The provisions of Annex 3 rest upon a program worked out by the government in co-operation with industry, setting forth the priority use of the nation's telephone and telegraph systems and the priority resumption of intercity private line service when interrupted. The program has been promulgated and is in voluntary use throughout the country today. Application of its provisions will be mandatory in a situation under which the country is attacked.

Under this program the user of public correspondence telephone calls, TWX, and telegraph messages himself interprets the degree of urgency and on the basis of that interpretation the supplier of the service accords the degree of priority in each case. The priority system for the resumption of intercity private line service involves a procedure in which certification of a private line within a

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priority category is made by the user to the common carrier furnishing the service. Certifications, to be effective, must be made in advance and should be maintained in a currently corrected status, DMO IX-4 provides. These certifications form the basis upon which a determination may be made to govern the degree of priority under which service is to be restored. In cases of application for new or additional telecommunication service, reference will be made to the emergency communications agency for decision.

FOR telephone communications other than by private line priorities are listed under three groups, designated 1, 2, and 3. Priority 1 Emergency, the first group, is to be granted only to calls which directly concern:

- (1) Immediate dangers due to the presence of the enemy.
- (2) Intelligence reports on matters leading to enemy attack requiring immediate action.
- (3) Urgent calls to or from the U. S. Armed Forces and their Allies.
- (4) Proclamations of Civil Defense Emergency.

Priority 2 Emergency is to be used only for calls which require immediate completion for the national defense and security, the successful conduct of war, or to safeguard life and property, including:

- (1) Initial reports of damage due to enemy action.
- (2) Civil defense activities immediately subsequent to and resulting from enemy attack.
- (3) Calls that require immediate com-

pletion to or from the U. S. Armed Forces and their Allies.

- (4) Natural disaster of extreme seriousness and widespread damage.

Priority 3 Emergency embraces these additional categories:

- (1) Civil defense or the public health and safety.
- (2) Important governmental functions.
- (3) Supply and movement of food.
- (4) Maintenance of essential public services.
- (5) Production or procurement of essential materials and supplies.
- (6) Calls requiring rapid completion to or from the U. S. Armed Forces and their Allies.

Calls of lower priority will always be interrupted to make way for calls of higher priority.

THE precedence system is available for use by the government; essential war industries and services such as communications, power, public utilities; the Red Cross, etc.

Similar orders of precedence for full rate domestic and international telegraph, cable, and radiotelegraph messages are set forth in an appendix (Attachment B) to DMO IX-4. The priorities are grouped under three headings: emergency, immediate, and rapid. One of these words must be written by the authorized sender as the first word in the address on messages at the time of filing.

There is also outlined the priority system for the resumption of intercity private line service, similarly consisting of three priority classifications and various subordinate classifications.

When and How Should The Utility Executive Retire?

By ALFRED M. COOPER*



The time for an executive to retire should be flexible. Why discard valuable experience gained through the years solely because of an arbitrary age limit? In many cases partial retirement or gradual retirement over a period of time is preferable, both for the company and the individual. Each case should be considered on its individual merits. Even physical disability should not necessarily bar a good brain from further activity since physical limitations do not of themselves impair our cerebral processes.

DURING the years I was educational director for a large publicly owned electric utility, one of our most pressing personnel problems became the establishment of a satisfactory retirement plan for all employees. Its preparation called for months of careful study, both by management and the representatives of the employees' association.

After protracted discussion we were about to draw up a firm pension plan, to be approved by management and all employees. But just as the recommendations appeared completed a tragic occurrence in the office of a local privately owned utility forced us to carefully reconsider our entire plan.

Briefly, an employee who had been arbitrarily retired after thirty years of service, on what he considered to be a wholly

inadequate pension, presented himself in the outer office of the utility company's personnel manager and requested the secretary to secure for him a brief interview with her boss. He was kept waiting but a few minutes before being ushered into the inner office.

THE personnel manager knew the employee well and stood up, smiling, to shake him by the hand. The employee drew a revolver, shot the executive through the heart, then sat down quietly to await the coming of the police.

It was ascertained that the man had become mentally unbalanced through prolonged brooding over the sorry future faced by himself and his family. He was later confined to a mental institution. No blame ever attached to the personnel manager, who was of course carrying out fixed company policy in matters pertaining

*Free-lance writer and author, resident in Indio, California. For additional personal note, see "Pages with the Editors."

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to the enforced retirement of employees at a fixed age.

But the event proved so terribly dramatic that it resulted in both liberalization and added flexibility of the provisions of our then proposed pension plan, particularly with regard to arbitrary retirement at any predetermined age.

Executive Retirement Plan Studied

IN addition some of us began giving further study to that section of the plan which applied specifically to the retirement of the highest executives of the organization. All this occurred many years before magazines such as *Fortune* began their series of studies to determine what considerations should govern the when and how of retirement of industrial executives, what should govern retirement

ages under varying conditions, and ways and means of utilizing the unique knowledge and organizing ability of the executive, even after he had reached a point (regardless of age) when he was no longer capable of carrying the crushing load of responsibility entailed in the administration of a company or a division.

MUCH additional study has been given to this matter of the "when" and "how much" of retirement for industrial executives generally, and of utility executives in particular. In some instances medical directors were permitted to set up general retirement specifications; in other cases decisions were made by management, after studying a complete medical report submitted by a competent physician.

DESPITE the study that has been given to this matter of executives' retirement there appear to exist wide variations in thought and practice relating to this vital problem within scores of American utility organizations, both publicly and privately owned. And to the extent that the men comprising top management are more important to the success of the organization than any number of those within the ranks, it may be profitable to scrutinize carefully various retirement plans for executives.

Retirement Age Should Be Flexible

IT has become increasingly evident that the executive himself may be the very best judge of the time he should retire. Equitable retirement plans may function smoothly for the lineman and station operator, and such junior employees usually have many years in which to plan a secure financial future, even in an uneasy inflationary period. And of course the rank-and-file employee is the first to concede that he can be replaced tomorrow by a younger man, whom he has probably personally trained to take over when a looked-

forward-to retirement age rolls around. (Of course, even here many retirement plans are sufficiently elastic to permit some discretion as to the exact date a high-tension lineman must finally hang up his climbers.)

In the case of the top-flight executive, however, his worth to the company is so great, in terms of intricate knowledge, special capabilities, and priceless contacts, that it is even less likely that hard-and-fast rules, or even flat medical edicts, can be permitted to determine the exact age or time for retirement for the headman.

WHEN AND HOW SHOULD THE UTILITY EXECUTIVE RETIRE?

Thoughts on Physical Condition

So far as medical reports are concerned, the most advanced thinking along these lines today appears to be based on a rather belated appreciation of the writings of Dr. Alexis Carrell as long ago as 1935. Dr. Carrell at that time firmly contended that a superb brain could function in a body that was far below par physically.

This thesis is directly opposed to the

"sound mind in a sound body" theory which works so admirably in the matter of developing the adolescent to maturity. Which may be one reason why our medicos have been slow in appreciating the deep insight displayed by Dr. Carrell in this particular instance. But a little observation made among the outstanding leaders in both government and industry adds weight to Dr. Carrell's deductions.

THUS, everyone in the industry is familiar with the achievements of Charles Proteus Steinmetz, developer of the Mazda lamp, and possessor of a brain capable of originating an entirely new system of mathematical computation. Dr. Steinmetz once told me, in a meeting on the back porch of his simple Schenectady home on a sizzling hot day in August, that his wizened hunch-backed frame had never left him free from pain a single hour of his lifetime. Certainly, if Dr. Steinmetz' retention by General Electric as chief researcher had depended upon his ability to pass a rigid physical examination he would have been shelved long before his phenomenal work in that organization was terminated by death.

Steinmetz is an extreme example of brain's triumph over lifelong physical disability. But in many utility organizations there are to be encountered a number of truly great executives who have found it necessary to continuously overcome some handicap related to a weakened constitution.

A possible reason for the continued functioning of a superb brain in an inferior body in such instances is disclosed in yet another contention of Dr. Alexis Carrell. In this instance he takes sharp exception with those who recommend systematic exercise as a means of keeping physically fit between the ages of fifty and eighty. Dr. Carrell states flatly that the exercise imperative for the proper development of the adolescent may be injurious to the physical well-being of the mature executive.

WE have in public life a number of outstanding examples of mentally vigorous executives nearing eighty who have never been known to so much as swing a golf club on Saturday. We have also too many examples, in both public and private employment, of men in positions of tremendous responsibility who exercise rigorously and religiously, yet who fail to make the Biblical threescore and ten.

There are, of course, plenty of exceptions in either category, just as we occasionally encounter an octogenarian who attributes his longevity to excessive use of whiskey and tobacco, and complete disregard for regular hours of rest and sleep. (If you can remember Kin Hubbard's bearded *Ez Pash*, that old gentleman's reply to the classic question regarding his longevity was that he didn't know, he just let 'em grow.)

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Sometimes, of course, an executive's difficulty may be traced to his propensity for violent exercise over week ends, followed by five days of sedentary living. I have also known of executives who, for good and sufficient reasons, were detailed for an extended tour of duty in our national capital. These gentlemen never appeared to experience difficulty in reacting well to the strenuous schedule imposed upon them by their duties as headmen of their local utility companies, but after six months in Washington they frequently returned home for extended hospitalization. This reaction may have been due to the rigors of entertaining, or it may have resulted from attempting to beat that bureaucratic run around for which all world capitals appear to be noted.

Wealth of Experience Important

IN any consideration of retirement schedules it is essential to bear in mind that wealth of experience which makes the services of the executive over sixty invaluable to his organization. As a single instance, the headman has long been accustomed to making weighty decisions on very short notice, the implications of which may well be so far-reaching that his own assistant might well delay just a little too long before taking any irrevocable action.

This is one reason why utility man-

agement is now hesitant either to set an arbitrary retirement age for executives, or to leave the date of such retirement solely to the discretion of the medical director. If for personal or family reasons the headman *wishes* to retire, say at age sixty-five or seventy, that is one thing.

But the tendency today is to follow the precepts of Dr. Carrell, and consider that a degree of bodily ill health must not be the determining factor in executive retirement. The tremendous fund of knowledge, the years of experience, and the habit of command which is second nature to the mature executive of high rank must also be taken into account.

GOING beyond the utility field for a moment, there are two famous examples that appear to support Dr. Carrell's contentions. One, of course, was the refusal of John Foster Dulles to permit great physical impairment to influence either his keenness of thought or his ability to draw on his hard-won knowledge of international affairs long after his health might have made his retirement mandatory in some corporations. The question here is not whether the executive's decisions are always right, but rather whether a successor taking over in a period of great international tension could have made better decisions even though in the best of health.

GM's Kettering Worked until Eighty-two

THE other instance concerns the well-publicized memo of General Motors' "Boss" Kettering, in which he informed his superiors that he would be glad to continue as research head at \$150,000 a year until age seventy-five, then to serve in the same capacity for nothing until age eighty, after which, he said, he would pay General Motors \$150,000 a year for the privilege of continuing on the job. There is no record that Kettering suffered any salary reduction, although he served there as head of research until his death at eighty-two.

WHEN AND HOW SHOULD THE UTILITY EXECUTIVE RETIRE?

It is conceivable that the time will come when retirement will have greater appeal to executives than is now the case. Much study is being given to the reasons for the shortened life expectancy of retired folk generally, as compared to those who remain actively in harness. It may be that we have a lot to learn about retirement as a way of life, as distinct from our traditional concept of retirement as a period when we work hard at doing nothing of importance.

Partial Retirement Considerations

It is also true that industry has only begun to explore the possibilities and benefits, both to the subordinate employee and the executive, of partial retirement. For one thing, economic factors may now make full retirement difficult for any per-

son, regardless of rank, just as inflation and cost-of-living problems have influenced so very many married women to return to some form of gainful employment just as soon as their children have reached school age.

Partial retirement for the skilled mechanic may mean either a shortened workday or full employment for two or three hours a week. For an executive it probably will mean greatly augmented delegation of authority or his retention on a part-time basis as consultant. If it is assumed that the headman has always delegated to the fullest practicable extent, then the alternative may take the form of consultative activity, in which the superior knowledge and administrative skill are utilized by his successor so long as he wishes to function in this capacity.

THE lieutenant who steps into the head man's shoes may well be dismayed at their roominess. No matter how capable he has proved as an assistant there is a great body of administrative knowledge that comes only through long experience in making critical decisions. If the emeritus should continue available for consultation, even if only for a period of a year or so, the hiatus between the lieutenant and the brigadier may be bridged much more rapidly and smoothly. Particularly is this true when the assistant is much younger when he takes over than was the headman when he took over.



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IN two instances recently brought to my attention, such consultation was successfully carried on for several years over a distance of 6,000 miles, the emeritus in each case functioning admirably of an evening, by telephone, after a relaxing day on the sands of Waikiki.

Sometimes this consultative relationship between the new headman and his former boss continues in effect for many months even though it has never been made official.

There are so very many important facts which never can become a part of the most intricate and comprehensive filing system. Should the lieutenant take charge at a time when his superior has been promoted, the headman is still available in an emergency. If such promotion of the assistant occurs when the headman is retiring, this is no longer true, unless management has taken whatever action is necessary to make such consultation official.

Intelligence Improves with Age

A STUDY recently completed at Iowa State University appears to prove conclusively that our brain power im-

proves steadily through the years. The check was made on a group of graduates averaging about sixty years of age, who had taken the old Army Alpha intelligence test back in 1919.

The recheck on the intelligence of these men proved that their mental capacity had improved sharply with the years. Similar tests made in other universities have proved that brilliant minds become more brilliant, even into ages between seventy and eighty.

THE problem of retirement varies of course in different companies. The important thing is that thought be given to the when and "how much" of an executive's retirement. It has been quite a while since age sixty-five could be considered as an automatic termination of usefulness. There is much variation between men at that age, both as to physical condition and their desire to remain in harness. And the problem has not been fairly solved, in the company's interest, until consideration has been given to the question of full retirement for executives, as compared with their retirement in instances to consultative status.

"WHAT is required is a dynamic tax program that keeps federal revenues up, not by taxing away the incentive and means of new enterprise, but by steadily increasing the tax base through business expansion.

"[The revised laws] will have to be more realistic than the present unplanned patchwork of measures, most of which were hastily adopted to finance wars and seldom, if ever, revoked.

"They will need to recognize that a reasonable profit, after all, is an honorable thing, especially when it's applied to the long-term task of creating more and better jobs. They will need to encourage, not stifle, the nation's productive initiative."

—BENJAMIN F. FAIRLESS,

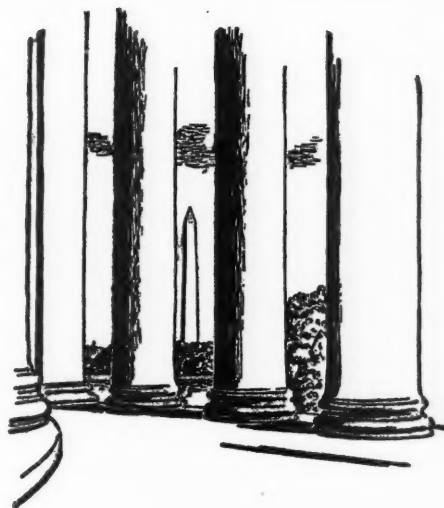
President, American Iron and Steel Institute.

Washington and the Utilities

TVA Revenue Financing Bill

BEFORE finally passing the TVA revenue bond bill, the Senate voted to expand by five miles the boundaries of the area which may get power from the Tennessee Valley Authority. The communities of Monticello and Hickman, Kentucky, were also included in the service area. The five-mile margin restriction was written into the bill, which would authorize TVA to issue its own self-financing bonds in the interest of boosting its power-producing capacity. Adoption of the five-mile limitation came when the Senate first accepted it as a committee amendment and then by voice vote defeated an amendment by Senator John C. Cooper (Republican, Kentucky) to strike it from the bill. The new restriction was offered by Senators Talmadge (Democrat, Georgia) and Randolph (Democrat, West Virginia).

Senator Cooper told the Senate that adoption of the Talmadge-Randolph restriction would mean an "absolute monopoly for private utilities" outside the TVA area. Opponents of such a limitation contended that some small communities 10 or 20 miles distant should be



able to draw on TVA power sources. Senator Kerr (Democrat, Oklahoma), in charge of the TVA bill, said he was "in sympathy" with Cooper's strike-out amendment but had to oppose it. He said the bill "is needed" and that the only way it could get through Congress and be approved by the President was with inclusion of the Talmadge proposal.

The House version of the bill contained a restriction against increasing the TVA area without congressional sanction, but the Senate Public Works Committee modified this. It voted to permit expansion of the area by the lesser of two formulas: $2\frac{1}{2}$ per cent of the area as of July 1, 1957, or 2,000 square miles. The Talmadge amendment included this but added the overriding five-mile restriction.

THE bill would let the TVA issue up to \$750 million in bonds, both principal and interest to be paid for from TVA power revenues. Senator Keating (Republican, New York) drew from Kerr a statement that elimination of a specific "buy American" section from the House bill would not prejudice application of existing laws protecting American pro-

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ducers of equipment like power turbines and generators.

In one other respect the Senate version was less acceptable to the administration than the House. The Senate revisions in the House bill, with respect to the lack of adequate budgetary and congressional "controls" over TVA, have been criticized as amounting to little more than a subterfuge.

The reference is to the proposed 90-day waiting period for new construction, during which Congress would have the theoretical authority to enact concurrent resolutions to veto or modify TVA plans. As a practical method of control, experience has shown that such a provision, requiring as it does prompt affirmative action by both branches of Congress within a limited period, is relatively valueless. Supporters of the TVA proposals could generally manage to delay affirmative action either in the House or the Senate for a period of ninety days. TVA could then proceed with expansion plans.

The administration sought, without success, to include a more workable budgetary control with authority vested in the Comptroller General's office or the Budget Bureau. Open White House threats of a veto were made during the Senate debate unless such a step was taken. The TVA self-financing bill, should it be enacted in the form proposed to the Senate, could set a far-reaching precedent for other federal commercial enterprises which might also seek authority to issue revenue bonds. Differences between the two houses will probably have to be combed out in conference. The final passage was by voice vote.

Trimble Bill Hearings

ON July 9th the House Public Works Committee started a two-day hear-

ing on the Trimble Bill (HR 8). Announcement came over the long fourth of July holiday week end, leaving brief opportunity for interested parties to prepare testimony. The bill, which goes by the ambitious title of "Water Conservation Act of 1959," is so far-reaching that there seems little chance of final action in Congress this year. Sponsor of the bill is Representative Trimble (Democrat, Arkansas).

The bill had remained so dormant since its introduction during the early days of the session that the sudden activity gave rise to speculation that the real purpose of the hearing was one of political strategy rather than serious expectation of legislation. The bill would promote a new policy and procedure "for the development of water resources of lakes, rivers, and streams" over all of the United States.

There are two avowed objectives of the bill: (1) to require river basin development as a whole as distinguished from piecemeal development for power, irrigation, or any other single purpose or purposes; and (2) to provide a broader basis for so-called multiple-purpose development of river basins by liberalizing the economic justification of projects through lower interest, longer depreciation, inclusion of intangible welfare features, and other forms of subsidy.

THE so-called "comprehensive plan" for the development of river basins would include such aspects of "optimum public benefit" as "recreation development, fish and wild-life development, pollution control or abatement, downstream benefits, agriculture, and any other benefit" contributing to the "well-being of society." The policy is established that if any such total benefits "tangible and intangible, primary and secondary, are deter-

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mined to exceed the total costs of a unit or project, a favorable recommendation for authorization shall be made by the agency making the study."

The cost of federal power development of any project would be greatly minimized under the Trimble Bill for purposes of repayment. As for allocation of cost according to benefits, the actual construction investment in power features would be subtracted from the overall estimated cost of other features and estimated benefits contributing to the sum total of the project. The bill provides that "monetary value of any benefit attributable to the unit or project shall be based not only upon present economic values, but also upon projected economic growth anticipated to occur during a reasonably foreseeable period in the future."

Cost of power benefits would be determined by either the cheapest alternative source of power available (including payments in lieu of taxes) or the value of power to users based on comparable alternative supply rates, whichever is lower. The rate of interest would be "equal to the average rate of interest borne by all marketable interest-bearing obligations of the United States . . . issued . . . during the fifteen fiscal years immediately preceding." In determining power rates, depreciation charges would be estimated "over the useful life of the project or a period of one hundred years, whichever is the shorter." The bill would not apply to TVA, but it would apply to other existing federal projects.

FPC Legislation Asked

THE chairman of the Senate Interstate Commerce Committee has introduced 19 bills upon request of the FPC to carry out recommendations of its 1958 annual report to Congress. The bills, numbered

consecutively S 2248 through S 2266, would amend both the Federal Power Act and the Natural Gas Act, but mostly the latter. They do not, however, cover the proposed exemption of independent producers from FPC jurisdiction as already contained in the Harris Bill (HR 366).

The most important of these are bills to amend both the Power Act and the Gas Act so as to permit wholesale interstate companies to file rate changes from previous contract rates notwithstanding the failure of purchasers to agree to specific changes. Other important proposed changes affecting gas companies would give the FPC authority over direct industrial sales and security issues.

The other bills proposed by Senator Magnuson (Democrat, Washington), chairman of the Senate Interstate Commerce Committee, are mostly procedural or clarifying. One would give the FPC authority to correct discrimination in the allocation of gas of an interstate pipeline in periods of shortage. Another would spell out FPC authority to control service abandonment. The remaining bills deal with hearing and notice requirements, safety regulations, hold-over tenure for incumbent commissioners, emergency and voluntary interconnections, importation and exportation of gas, and additional investigatory authority.

A BRIEF description of these bills by number follows:

S 2248. A bill to amend the Natural Gas Act with respect to the importation and exportation of natural gas;

S 2249. A bill to amend the Natural Gas Act to give the Federal Power Commission authority to order natural gas companies to increase rates where necessary to correct undue discrimination;

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S 2250. A bill to amend § 4 of the Natural Gas Act;

S 2251. A bill to amend the Natural Gas Act to give the Federal Power Commission authority to suspend changes in rate schedules covering sales for resale for industrial use only;

S 2252. A bill to amend the Natural Gas Act to confer upon the Federal Power Commission authority to exercise control over the allocation of the available supply of natural gas moving in interstate commerce during periods of shortage or when required for national defense;

S 2253. A bill to amend § 7(b) of the Natural Gas Act, and for other purposes;

S 2254. A bill to amend § 7(c) of the Natural Gas Act, and for other purposes;

S 2255. A bill to amend § 7(f) of the Natural Gas Act;

S 2256. A bill to amend the Natural Gas Act to authorize the Federal Power Commission to prescribe safety requirements for natural gas companies.

S 2257. A bill to amend the Natural Gas Act with respect to the interconnection of facilities for the transportation of natural gas;

S 2258. A bill to amend § 12 of the Natural Gas Act with respect to the issuance of securities;

S 2259. A bill to amend § 14 of the Natural Gas Act;

S 2260. A bill to amend § 15 of the Natural Gas Act;

S 2261. A bill to establish certain provisions with respect to the terms of office of the members of the Federal Power Commission;

S 2262. A bill to amend § 10 of the Federal Power Act;

S 2263. A bill to authorize the Fed-

eral Power Commission to exempt small hydroelectric projects from certain of the licensing provisions of the Federal Power Act;

S 2264. A bill to amend the Federal Power Act to prohibit abandonment of facilities and service without the consent of the Federal Power Commission;

S 2265. A bill to amend § 205 of the Federal Power Act; and

S 2266. A bill to amend the Federal Power Act with respect to intervention in Federal Power Commission proceedings.

Regulatory Reform Proposals

LEGISLATION affecting six independent federal regulatory agencies was proposed in a series of planned hearings before the House Legislative Oversight Subcommittee last month (June). At the end of a series of round-table discussions attended by representatives of industry and bar associations, as well as trial examiners and regulatory commissioners, a number of specific questions had been discussed: What to do about so-called "ex parte" communications, where a commissioner or a staff member is approached by one party without the knowledge or consent of the other parties? What is the proper rôle of the hearing examiner? How can case delay and backlog of staff work be avoided? How can conflict of interest be eliminated?

Valentine B. Deale, a Washington, D. C., attorney, summing up the recommendations said that legislation was needed to prevent improper ex parte communications. Deale went on to say that it seems to be admitted by all that sensible commission operations require a great deal of ex parte communications which are not of the improper type. The problem is to separate the proper from the improper. Deale also summed up the testi-

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mony to the effect that the rôle of the hearing examiner should be defined more clearly and his responsibilities for the conduct of hearings spelled out. Reference was also made to the general view that regulatory commissions should be subjected to periodic review and analysis so as to check for operating responsibility, section by section.

DEALE's summary was made at the suggestion of Robert W. Lishman, chief counsel of the Oversight Subcommittee. Deale covered the operations of the Federal Communications Commission, Securities and Exchange Commission, Federal Power Commission, Interstate Commerce Commission, Federal Trade Commission, and Civil Aeronautics Board. He said that the testimony pointed to the need for a chief administrator for each commission, who will function as a "boss" with the appropriate statutory authority.

He said also that backlog and case delays are symptoms of operating problems which should be investigated to see why such delays exist and how they can be avoided. The problem of conflict of interest, it was said, might be helped by a longer tenure for commissioners and staff, with additional inducements to make regulatory commission work an attractive career. Finally, the suggestion was made that there should be more personal responsibility in making decisions.

Northwest Power Programs

A CONTRACT has been approved that provides for the integration of three Bureau of Reclamation power projects in southern Idaho with the system of the Idaho Power Company. This will have the effect of firming up an additional 30,000 kilowatts of output from bureau hy-

dro plants. The additional power purchased by the bureau will probably be sold to its existing commercial customers.

The contract calls for the bureau to transmit power for the company to the extent excess capacity is available. And the bureau will sell 19.5 million kilowatt-hours of co-ordination energy per year to the company to the extent this energy is available after supplying firm power customers. It will also sell nonfirm energy to Idaho Power. The interchange of energy to handle peak requirements will prove mutually beneficial to both Idaho Power and the Reclamation Bureau.

More time to complete a study of an intertie between the Bonneville Power Administration power system and Pacific Northwest and California power systems has been asked by BPA Administrator Pearl. On May 10th the Senate Interior and Insular Affairs Committee directed the agency to make a study and report to the committee by July 15th. An informal committee of public and private power executives expressed the belief that it would take six months to a year to complete such a study.

AT a meeting later held by BPA Administrator Pearl means by which BPA could best carry out the Senate committee's directive were discussed. It was suggested that a smaller committee be formed, made up of a single representative from each of the following: Washington, Oregon, Idaho, Montana, California, FPC, public utility districts of the Northwest, electric co-operatives, California public power agencies, California private utilities, Northwest Public Power Pool, and the Pacific Northwest Utilities Conference Committee.

Washington, Oregon, and California already are proceeding with their own studies of a power intertie.



FCC Confirms Menomonee Falls Case

THE Federal Communications Commission has confirmed with only slight changes, its examiners' opinion in the controversial Menomonee Falls case. In this case the United States Independent Telephone Association (USITA) objected to the granting of a certificate to the Wisconsin Telephone Company to acquire the independent properties of the Menomonee Falls Telephone Company and Lisbon Telephone Corporation in suburban Milwaukee. Wisconsin Telephone Company is a Bell system company.

The original decision of two FCC examiners questioned the binding nature of the so-called Hall Memorandum of 1922. This provided that the Bell system voluntarily adopt a policy of avoiding the acquisition of independent telephone properties where other independent companies were ready, willing, or able to acquire them. However, in the FCC decision the commission found that the Menomonee Falls case had been handled by the Bell company within the terms of the Hall Memorandum as it applied to "distress cases." The opinion stressed the poor quality of service and the inability of the independent owner to improve it, plus the fact that no firm offer to purchase the

Telephone and Telegraph

property had been forthcoming from an independent company source.

In its opinion the FCC stated that it will follow a case-by-case approach in judging all such acquisition cases. In this case it was found that the Bell company had originally attempted to trade other properties with the independent and had been unable to do so. The rapidly growing Milwaukee suburban area and the improved types of telephone service that such areas demand greatly influenced the FCC. The Wisconsin commission also relied heavily on the interest of the telephone-using public in a growing area.

THE FCC agreed, in principle, with the USITA's contention that the state commission's position was not binding on the FCC. However, it held that the state commission's "on-the-scene knowledge" should be given great weight.

The FCC opinion said "there is no doubt in this record that, from the standpoint of mechanical equipment, an independent would be in as good a position to serve the public concerned as would Wisconsin." However, such theoretical comparative performance was ruled out as an issue, in the absence of an actual independent effort to acquire the properties.

TELEPHONE AND TELEGRAPH

New Chief of FCC Phone Division

SYDNEY L. O'GUIN has been appointed as chief of the telephone division of the common carrier bureau of the Federal Communications Commission. Mr. O'Guin has been serving as acting chief since Bernard Strassburg was promoted to assistant chief of the bureau last March.

Mr. O'Guin was born in Hohenwald, Tennessee, and received his BS degree from the University of Tennessee. He joined the FCC in 1946 and from 1950 to 1955 he was chief of the common carrier bureau's field office in Atlanta, Georgia. He has also served as chief of the telephone division's accounting compliance branch and the rates and revenue requirements branch of the Federal Communications Commission.

Radio-TV Equal Time Legislation

THE House Interstate Commerce Subcommittee on Communications has favorably reported Chairman Oren Harris' bill, HR 7985, designed to correct the confusion from a recent Federal Communications Commission ruling regarding "equal time."

The "equal time" provision of the Federal Communications Act is that section of the law which requires radio and TV stations giving any political candidate free time on the air to extend the same privilege to rival candidates. It had been assumed that this referred only to major party candidates. The FCC ruled, however, that this provision extends to all candidates, regardless of the size of the party.

The subcommittee conducted extensive hearings into this problem and the White House has made it known that it would

favor legislation to override the FCC ruling.

The Harris Bill would exempt newscasts, panel shows, special events, and similar programs from the "equal time" provision of the law. It is expected that the full committee will act on the bill in the very near future. Since President Eisenhower has already indicated that he would gladly sign such a bill, it is almost sure to become law during the current session of Congress.

Supreme Court Ruling Eases Libel Danger

THE Supreme Court has ruled, in a split decision, that radio and television broadcasters may not be sued for libel for statements made over their stations by qualified political candidates. The court's 5-to-4 decision applies both to candidates who demand air time under the "equal time" provision of the Federal Communications Act and the candidates they are seeking to answer. The high court also held that radio and television stations cannot censor statements made by such candidates.

The case before the court was brought by the Farmers Educational and Co-operative Union of North Dakota. The co-operative had sued Station WDAY in Fargo, North Dakota, on the basis of a campaign statement made by an independent candidate for the U. S. Senate in 1956. The farmers' co-op maintained that Station WDAY should have censored the candidate's speech. Justice Black, speaking for the majority, said, "if any censorship were permissible, a station so inclined could intentionally inhibit a candidate's legitimate presentation under the guise of lawful censorship of libelous matter."

The co-operative also attempted to

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show that the station would still be responsible for libelous statements made by a candidate even though the station could not screen out such libelous matter. Regarding this Justice Black stated:

Under this interpretation, unless a licensee refuses to permit any candidate to talk at all, the section would sanction the unconscionable result of permitting civil and perhaps criminal liability to be imposed for the very conduct the statute demands of the licensee.

The Supreme Court's ruling on the interpretation of the Federal Communications Act of 1934 is important in view of the approaching 1960 election battle.

Virginia City, Nevada, Retains Antique Phone Equipment

PROGRESS, efficiency, and modernization have become such catchwords in the twentieth century that it is most pleasing to note a community which wants to keep its old ways and a utility company which bows to the wishes of its old-fashioned customers.

Bell Telephone of Nevada had considered the changeover of all local manual systems to dial exchanges. This would have given Nevada the distinction of being the first all-dial state in the Union. Only a few years after the invention of the telephone, Virginia City, Nevada, installed its first manual exchanges. Throughout the years the operators have placed calls and helped the local subscribers, above and beyond the call of duty, and all in the best tradition of the switchboard operator. When Bell made its announcement about the "modern" dial system a wave of protests came in, and the manual system was retained.

Only recently the company was forced to vacate the exchange—here was the per-

fect opportunity to erect a "modern" building, but out of respect to the wishes of the community Bell erected a building of Victorian design. The antique manual switchboards were transferred and installed in the new building.

An editorial from the *Territorial Enterprise*, Virginia City, Nevada, stated:

Bottoms up, then, to Bell of Nevada, to its General Manager Paul Garwood, to its local Manager Jim Butler, and to the fact that a subsidiary of a giant among utilities found it fitting and proper to bow to a one-time giant among western cities whose very existence today is predicated upon its continuity with the better past.

Communications Satellite Planned for 1962-63

DIRECTOR Roy W. Johnson of the Defense Department's Advanced Research Projects Agency has testified before the House Space Committee regarding a projected communications satellite.

ARPA hopes that such a moon will be fired into orbit in 1962 or early 1963. According to Dr. Johnson, the aim of the project will be to get a satellite into orbit 22,000 miles in space. The prescribed orbit would carry the man-made moon around the earth once every twenty-four hours and, therefore, it would be stationary over a single point once each day.

The first type of satellite launched will be the "delayed repeater" type. A message will be beamed at the satellite when it is over the East coast. The satellite will record the message and then, as it passes over the continent, a signal will cause it to rebroadcast its message over some point on the West coast. Later models, in higher orbits, will be "instantaneous repeater" satellites.

Financial News and Comment

By OWEN ELY



Atomic Power Developments And Recent Cost Data

JAMES F. FAIRMAN, senior vice president of Consolidated Edison, in a statement before the Joint Congressional Committee on Atomic Energy in February, pointed out the importance of building prototype or pilot plants for new types of atomic reactors — full-scale plants should only be built after technical problems have been solved. The field for maximum expenditure of time and money should also be in the area of greatest technological mastery. Of course the full economic potentiality of various types of plants can only be determined by building full-scale plants—but it is necessary first to justify their construction. (The commission and the committee seem to have been impressed by this argument, judging

from later developments.) However, this did not mean that development of new concepts should be cut off or discouraged, he stated.

The “hardships of nuclear life” are illustrated by the history of Consolidated Edison’s Indian Point plant. In 1955, when the project was undertaken, a pressurized-water reactor was chosen because it was felt that experience with the Shippingport plant of that type would minimize technical and safety problems as well as costs.

It was also decided to use a combined uranium-thorium fuel cycle since it appeared that this would mean a valuable contribution to technology and also an important step to reducing fuel costs. But it did not prove feasible to design Indian Point as a copy of Shippingport. Also, thorium technology has presented unexpected problems and its potential as a fuel cannot be fully evaluated until the comparative prices for plutonium and U-233 have been stabilized.

LIKE others with similar projects, Con Edison has been concerned about the substantial rise in construction costs as compared with the original estimates—due in part to lack of adequate data, plus steadily rising price and wage levels. In February, 1957, when it was planned to

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expand capacity to 275,000 kilowatts by incorporating a conventional superheater, total cost was estimated at \$70 million. About a year ago the estimate was \$90 million and has now risen to \$100 million, an increase of over 40 per cent.

Originally, October 1, 1960, was considered a target date for final completion but now the actual date of operation has been postponed one year. As of January 31, 1959, about \$25 million had actually been expended. Recently the containment sphere (inside the five-foot-thick concrete shield) has been erected. Personnel are being trained, but little recent progress had been made in making arrangements for fuel reprocessing, waste disposal, etc. The company would prefer to have a "fuel merchant" take over these problems and may ask for competitive bids in the future. The AEC might well set up a program to encourage an atomic reprocessing "industry."

A FEW weeks ago Consolidated Edison arranged a trip for a large group of utility analysts to visit the Indian Point plant. In this connection literature giving "vital statistics" of the project was distributed. Most of these data were of a technical engineering character, but a summary of financial items may be of interest.

Based on the estimated construction budget of \$100 million, cost per kilowatt would be \$535; but including the incremental capacity due to the added superheater, it would be reduced to \$365 per kilowatt. (Of the 275,000-kilowatt capacity, 59 per cent would be from reactor heat and 41 per cent from the superheater.)

The turbine generator will have a steam pressure of 335 pounds and temperature of 1,000 degrees. The annual fuel requirement will be 432 pounds of enriched U-235

oxide, 9 tons of thorium-232 oxide, and 42 million gallons of oil for the superheater. (U-233 will be produced in the reactor.) The heat rate is estimated at 12,900 Btu per kilowatt-hour for the reactor and 7,700 for the superheater—an average of 10,000 for the station. Cost of generating one kilowatt-hour in mills is now estimated as follows:

Fixed Charges		7.3
Fuel—Nuclear	8.0	
Oil	3.4	6.1
Operation and Maintenance9
Total		14.3

PRESIDENT Earle J. Machold of Niagara Mohawk Power Corporation, in a recent talk before the American Institute of Electrical Engineers, compared kilowatt-hour costs at atomic power plants with those of conventional fuel-burning plants. He estimated fuel cost at 3.5 to 10 mills for atomic power plants, compared with 1.8 to 4 mills for conventional steam plants. Cost of construction per kilowatt was estimated at \$300-\$700 for atomic plants *versus* \$125-\$200 for fuel-burning plants; and assuming an 80 per cent load factor, fixed charges would work out at 6 to 14 mills for atomic plants and 2.6 to 4 mills for conventional steam plants. Total costs per kilowatt-hour would thus approximate 9.5 to 24 mills for atomic plants *versus* 4.4 to 8 mills for conventional plants. Thus atomic power would approximate two to three times that of steam power.

THE *Electrical World* (June 22nd issue) has published comprehensive data on (a) nuclear power plants now operating, (b) those under construction, and (c) others still in the planning stage.

Estimated energy costs per kilowatt-hour for those plants for which such data are given are shown in the table on page 223.

FINANCIAL NEWS AND COMMENT

THIS issue also contains a number of other interesting articles on atomic power. Ralph Balent of the Atomics International Division of North American Aviation reports that the recent AEC-sponsored organic cooled reactor design study of a 300,000-kilowatt plant indicated that it should produce power in the cost range of 7 or 8 mills. A six-year development program would, he thinks, produce power costs of 8.1 mills by 1965, and a larger plant might be capable of as low a figure as 6.1 mills by 1969.

The estimated plant cost would be \$231 per kilowatt as compared with present-day (conventional) costs of \$183. Fuel cost, at the usual 80 per cent load factor, is estimated at 2.5 mills—this low figure being achieved largely through use of aluminum powder metal for fuel element cladding. Plant cost per kilowatt-hour is based on the usual 14 per cent on investment to cover depreciation, taxes, interest, dividends, etc.

AN article by Messrs. Jones and Lloyd of Westinghouse Electric also described a proposed nuclear power plant which Westinghouse is "ready to build" for service by early 1965, of an "advanced" pressurized-water type. Capital

cost is estimated at \$236 and power cost at 8.4 mills. J. L. Schanz and D. M. Imhoff of General Electric write about that company's boiling water reactor, and foresee a possible reduction in kilowatt-hour cost from around 11 mills currently to a "potential" of 6.5 mills by the middle of 1965. This improvement would be achieved by increasing the unit size to 400-500,000 kilowatts, increasing thermal efficiency, reducing fuel fabrication costs by at least half, etc. In a four-page ad, General Electric reports that construction of the Dresden (boiling water) plant in Illinois is now 83 per cent complete, construction being six months ahead of schedule. Costs were reported to be "within original estimate," which seems contrary to the widespread assumption that costs had soared since the original \$45 million estimate. In GE's opinion (see chart on last page of ad) nuclear power plants by 1970 should be competitive with 25 per cent of conventional plants, although competitive atomic plants will be operating in high fuel cost areas by 1965.

ANOTHER article by a representative of Allis-Chalmers describes the Pathfinder plant to be built for Northern States Power and other companies, representing



	Size- Kw. Capacity	Generating Cost (Mills Per Kwh.)
<i>Now Operating</i>		
Duquesne Light	68,000	64.4*
Oregon National Lab.	5,000	52.0
<i>Under Construction</i>		
Consolidated Edison	275,000	14.3
Commonwealth Edison	180,000	7.5-9
Yankee Atomic	120,000	12-14(a)
Consumers (Nebraska)	81,000	10-11
Elk River Co-op.	22,000	20.7
<i>In Planning Stage</i>		
Pacific G. & E.	60,000	8(b)
Piqua, Ohio (Municipal)	11,000	10-11(c)

* Now in downward trend.

(a) Mid-1960's.

(b) With second core.

(c) Being revised to provide for complete reactor containment.

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the "second generation" of boiling water type reactors.

Consumers Power recently announced that it would build a 50,000-kilowatt boiling water reactor at a cost of \$30 million to be completed by 1962. The primary objective will be development of engineering and economic data on high power density and high specific power.

Bond Financing Declines Sharply in First Half; More Common Stock Issued

IN the first half of 1959 total utility financing (including telephone and miscellaneous utility companies), as compiled by Ebasco Services, was substantially below that of the previous year, as shown in the table at top of page 225.

About half of the decrease was due to the fact that American Telephone and Telegraph Company did not do any financing—in 1958 it had issued \$718 million convertible debentures on a subscription basis.

This year the proportion of debt financing was considerably lower than last year, even after allowing for the lack of telephone financing—presumably due to high money rates and increasing internal generation of cash. (While the amount of cash generated by tax savings from accelerated amortization is declining, this should be more than offset by the increased tax deferrals resulting from accelerated depreciation, which increases fairly rapidly along with new construction expenditures.)

Preferred stock financing also declined by 19 per cent. On the other hand, com-



JUNE UTILITY FINANCING PUBLIC OFFERINGS OF ELECTRIC AND GAS UTILITY SECURITIES

Date	Amount (Mill.)	Description	Price To Public	Under- writing Spread	Offer- ing Yield	Aver. Yield For Securities Of Similar Quality	Moody Rating	Success Of Offer- ing
<i>Bonds</i>								
6/3	\$50	Pub. Ser. E. & G. 1st 5½ 1989	101.93	.65C	5.00%	4.66%	Aa	a
6/4	25	Florida P. & L. 1st 5 1989	100.78	.63C	4.95	4.66	Aa	a
6/17	10	United Gas Imp. 1st (s. f.) 5½ 1984* ..	102.20	.72C	4.97	4.86	A	a
6/18	5	St. Joseph Lt. & Pwr. 1st (s. f.) 5 1989*	101.25	.94C	4.92	4.86	A	b
6/19	5	Worcester Gas Light 1st (s. f.) 5½ 1979	101.87	.98C	5.10	4.86	A	b
6/24	20	Northern Ill. Gas 1st (s. f.) 5 1984 ..	100.71	.75C	4.95	4.67	Aa	b
6/24	5	Brockton Edison 1st (s. f.) 5½ 1989 ..	101.50	1.03C	5.15	4.87	A	b
6/26	5	Mississippi Power 1st (s. f.) 5½ 1989 ..	100.38	.77C	5.10	4.87	A	b
<i>Preferred Stocks</i>								
6/10	25	Duke Power 5.36% Pfd.	102.10	1.68C	5.25			a
<i>Common Stocks—Offered to Stockholders</i>								
6/1	9	United Illuminating	26.50	—	5.28		Earns.- Price Ratio 6.7	a
6/3	23	Virginia Elec. & Pwr.	33.10C	—	3.33		5.1	a
6/3	29	Philadelphia Electric	45.50	N	4.92		6.3	a
6/6	0.3	Greenwich Gas	12.50	.50N	5.60		7.9	—

C—Competitive. N—Negotiated. *—Nonrefundable for five years or more.
Source, Irving Trust Company

FINANCIAL NEWS AND COMMENT

	Millions of Dollars		
	First Half 1959	First Half 1958	Per Cent Decrease
Electric Utilities	\$1,159	\$1,638	29%
Gas Companies	464	517	10
Telephone Companies	160	986	84
Other Companies	34	10	—
Total	\$1,817	\$3,151	42%

mon stock financing rose to \$481 million as compared with \$276 million in the first half of 1958, reflecting the good market for utility stocks which prevailed in the first three or four months of this year. The proportion of common stocks offered publicly was 39 per cent in the 1959 period, compared with 33 per cent in 1958—the balance being offered by subscription to stockholders.

DUE to rising money rates refunding operations were very small this year—about 2 per cent of total financing—

and divestments were negligible. Subscription offerings—\$98 million debentures, \$21 million preferred stock (convertible issues), and \$292 million common stock—were underwritten to the extent of 88 per cent. Of the amount underwritten, 72 per cent was negotiated with stand-by underwriters, and 28 per cent was handled by competitive bidding—a larger proportion than last year.

Private sales of bonds and preferred stocks totaled \$181 million or 10 per cent of total financing, compared with \$228 million last year—nearly the same propor-

CALENDAR OF PROPOSED UTILITY OFFERINGS JULY 29TH TO NOVEMBER 1ST

Date of Bidding Or Sale	Approx. Amount (Millions)	Bonds	Method Of Offering	Moody Rating†
7/29	\$ 8	Public Service of New Hampshire	C	A
8/4	15	Pennsylvania Electric	C	Aa
8/5	4	Alabama Gas	C	Baa
8/18	35	Consumers Power	C	Aaa
9/17	18	Georgia Power	C	A
9/—	30	Boston Edison	C	Aaa
10/—	30	Columbia Gas System	C	A
*	5	Arkansas Power & Light	—	A
*	7	Worcester County Electric	C	Aa
*	6	Tucson Gas Electric Light & Power	—	—
*	10	Kentucky Utilities	C	A
<i>Convertible Debentures</i>				
*	23	American & Foreign Power	—	Baa
8/5	11	Pacific Power & Light	—	Baa
<i>Preferred Stock</i>				
8/6	3	Alabama Gas	**	—
9/9	3	Community Public Service	—	—
<i>Common Stock—Offered to Public</i>				
*	1	Florida Water & Utilities	N	—
*	—	Middle South Utilities	—	—
<i>Common Stock—Subscription Offerings</i>				
7/22	20	Northern States Power	C	—
7/29	1	Brockton-Taunton Gas	N	—
9/—	30	Union Electric	C	—

*Indefinite. **To be sold on subscription basis. C—Competitive. N—Negotiated. †Preliminary rating, or a rating of similar issue of same company.

PUBLIC UTILITIES FORTNIGHTLY

OFFERING OF SECURITIES BY PUBLIC UTILITY COMPANIES

(000 omitted)

	January 1 to June 30, 1959					January 1 to June 30, 1958				
	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies
Long-Term Debt										
Offered Publicly	\$ 865,980	\$ 599,500	\$ 211,480	\$ 55,000	-	\$1,558,314	\$1,199,500	\$278,566	\$175,000	\$ 5,248
Offered through Subscription	97,575	89,575	-	-	8,000	736,013	19,700	-	718,313	-
Offered Privately	160,585	93,150	40,450	6,200	21,185	216,143	82,693	97,850	30,000	5,600
Total	\$1,124,140	\$782,225	\$251,930	\$61,200	\$29,185	\$2,612,470	\$1,302,093	\$376,416	\$923,313	\$10,648
Preferred Stock										
Offered Publicly	\$ 170,792	\$ 65,142	\$ 77,650	\$ 28,000	-	\$ 248,000	\$ 164,500	\$ 78,000	\$ 5,500	-
Offered through Subscription	21,107	-	21,107	-	-	3,000	3,000	-	-	-
Offered Privately	20,300	12,300	3,500	1,000	3,500	12,100	12,100	-	-	-
Total	\$ 212,199	\$ 77,442	\$102,257	\$ 29,000	\$ 3,500	\$ 263,100	\$ 179,600	\$ 78,000	\$ 5,500	-
Common Stock										
Offered Publicly	\$ 188,520	\$ 123,199	\$ 1,636	\$ 68,893	\$ 832	\$ 92,212	\$ 38,203	\$ 31,416	\$ 22,593	-
Offered through Subscription	232,217	176,230	108,557	6,806	684	183,323	118,106	30,705	34,512	-
Total	\$ 480,737	\$ 299,389	\$110,193	\$ 69,699	\$ 1,456	\$ 275,535	\$ 156,309	\$ 62,121	\$ 57,105	-
Total Financing	\$1,817,476	\$1,159,056	\$464,380	\$159,899	\$34,141	\$3,151,105	\$1,638,002	\$516,537	\$985,918	\$10,648
SEGREGATION OF FINANCING - BY PURPOSE										
Total Refunding	\$ 32,172	\$ 7,172	\$ 25,000	-	-	\$ 187,189	\$ 59,400	\$ 12,789	\$115,000	-
Total Divestments	\$ 980	-	\$ 148	-	\$ 832	-	-	-	-	-
New Money										
Long-Term Debt	\$1,092,368	\$ 775,053	\$296,930	\$ 61,200	\$29,185	\$2,425,281	\$1,242,693	\$363,627	\$208,313	\$10,648
Preferred Stock	212,199	77,442	102,257	29,000	3,500	263,100	179,600	78,000	5,500	-
Common Stock	479,157	299,389	110,045	69,699	684	275,535	156,309	62,121	57,105	-
Total New Money	\$1,784,324	\$1,151,884	\$439,232	\$159,899	\$33,309	\$2,963,916	\$1,578,602	\$503,748	\$985,918	\$10,648
Total Financing	\$1,817,476	\$1,159,056	\$464,380	\$159,899	\$34,141	\$3,151,105	\$1,638,002	\$516,537	\$985,918	\$10,648
SEGREGATION OF FINANCING - BY TYPE										
Competitive Bidding	\$ 822,080	\$ 697,080	\$ 70,000	\$ 55,000	-	\$1,516,968	\$1,189,968	\$152,000	\$175,000	-
Negotiated Sales	\$ 403,212	\$ 90,721	\$220,766	\$ 90,893	\$ 832	\$ 481,558	\$ 212,235	\$235,982	\$ 28,093	\$ 5,248
Subscription										
Competitive Bidding	\$ 102,018	\$ 34,925	\$ 67,093	-	-	\$ 14,528	\$ 14,528	-	-	-
Negotiated Sales	259,675	221,366	23,390	6,295	8,624	156,398	124,944	\$ 29,868	\$ 1,596	-
No Underwriting	49,206	9,514	39,181	511	-	753,837	1,334	837	751,239	-
Total Subscription	\$ 410,899	\$ 265,805	\$129,664	\$ 6,806	\$ 8,624	\$ 924,336	\$ 140,806	\$ 30,705	\$758,825	-
Private Sales	\$ 181,285	\$ 105,450	\$ 43,950	\$ 7,200	\$24,685	\$ 288,243	\$ 94,993	\$ 97,850	\$ 30,000	\$ 5,600
Total Financing	\$1,817,476	\$1,159,056	\$464,380	\$159,899	\$34,141	\$3,151,105	\$1,638,002	\$516,537	\$985,918	\$10,648

Esso Services Incorporated, Business Management and Financial Department, July 6, 1959 - AVR

FINANCIAL NEWS AND COMMENT

tion if the big issue of telephone debentures be excluded from the 1958 total. Of the nonsubscription offerings made to the public, the underwriting of about one-third was on a negotiated basis and two-thirds was by competitive bidding; the proportion of negotiated sales was higher this year, presumably due to the difficult bond market.

Without any data on cash position and bank loans outstanding during the respective periods, it is difficult to speculate as to the size of a possible backlog of delayed utility financing. The total of issues definitely scheduled for the months of August-October remains low, but of course the vacation period may account for this.

Foreign Competition Forces Price Cuts in Big Generators

THE new trend toward huge steam turbine generators has brought about price cuts spurred by foreign competition and aided by "automated factory" savings. During a period of rising costs this

should provide a welcome opportunity for utilities to place orders for large units which may be needed in the future.

TVA is reported to have received a bid from GE for a 600,000-kilowatt unit at \$30 per kilowatt, and one from Westinghouse Electric on an 800,000-kilowatt unit at the same kilowatt cost. (Westinghouse has been charging about \$34 for smaller units.) However, three foreign bidders—Brown, Boveri & Company, C. A. Parsons & Co., Ltd., and English Electric Co.—are reported by *Business Week* to have given TVA bids on 500,000-kilowatt models at the remarkably low prices of \$17 to \$20 per kilowatt.

Possibly as a result of this foreign competition, GE recently announced price cuts of \$1 to \$4 per kilowatt on units ranging from 200,000 to 600,000 kilowatts. Presumably this means prices of about \$28-\$29 on units of 2-300,000 kilowatts and \$26-\$27 on larger units up to 600,000 kilowatts. (The largest unit now being produced is 500,000 kilowatts.) The new prices would mean important savings—as high as \$2.4 million on a large unit.



FINANCIAL DATA ON ELECTRIC UTILITY STOCKS

Annual Rev. (Mill.)		7/8/59 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% In- crease	Aver. Inc. In Sh. Earnings 1953-58	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
\$297	S American Elec. Power	50	\$1.68	3.4%	\$2.34My	5%	9%	21.4	71%	33%
57	O Arizona Pub. Serv.	38	1.20	3.2	*1.80Ma	—	11	*20.5	67	28
12	O Arkansas Mo. Power	22	1.00m	4.5	1.48Ma	4	2	14.9	67	32
36	S Atlantic City Elec.	45	1.50	3.3	2.02My	10	10	22.3	74	30
153	S Baltimore Gas & Elec.	48	1.80	3.8	2.61Ma	18	8	18.4	69	41
7	O Bangor Hydro-Elec.	39	2.00	5.1	2.75Ma	27	5	14.2	73	33
6	O Black Hills P. & L.	32	1.44	4.5	2.25Ap	9	4	14.2	64	32
109	S Boston Edison	62	2.80	4.5	3.55De	14	4	17.5	79	43
27	A Calif. Elec. Power	20	.80	4.0	*1.17Ma	26	6	*17.1	68	35
23	O Calif. Oreg. Power	37	1.60	4.3	1.98De	27	3	18.7	81	37
9	O Calif. Pac. Util.	36	1.60	4.4	2.43My**	7	20	14.8	66	31
70	S Carolina P. & L.	36	1.32	3.7	2.03My	4	7	17.7	65	42
32	S Cent. Hudson G. & E.	20	.80	4.0	*1.29Ma	2	6	*15.5	62	36
23	O Cent. Ill. E. & G.	32	1.44	4.5	2.06My	—	4	15.5	70	43
39	S Cent. Ill. Light	33	1.40	4.2	2.16My	5	9	15.3	65	33
55	S Cent. Ill. P. S.	43	1.76	4.1	2.59Ma	1	16	16.6	68	35
17	O Cent. Louisiana Elec.	48	1.80	3.8	2.20Ma	D2	8	21.8	82	30
39	O Cent. Maine Power	26	1.40	5.4	*1.53My	D18	3	*17.0	92	33
147	S Cent. & South West	65	1.80	2.8	2.62Ma	7	10	24.8	69	38
12	O Cent. Vermont P. S.	20	1.00	5.0	*1.38Ma	27	11	*14.5	72	35

PUBLIC UTILITIES FORTNIGHTLY

Annual Rev. (Mill.)	(Continued)	7/8/59 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earns.	% In- crease	Aver. Inc. In Sh. Earns. 1953-58	Price- Share Earn. Ratio	Div. Pay- out	Approx. Common Stock Equity
128 S	Cincinnati G. & E.	34	1.50	4.4	1.84Ma	D8	4	18.5	82	43
8 O	Citizens Util. "B"†	13	.53	4.0	.64De	6	6	20.0	82	48
119 S	Cleve. Elec. Illum.	48	1.80	3.7	2.65Ma	1	6	18.1	68	45
6 O	Colo. Cent. Power	45	1.44	3.2	2.07Ma	15	6	21.7	70	39
46 S	Columbus & S. O. E.	35	1.60	4.6	2.03My	D14	—	17.2	79	30
405 S	Commonwealth Ed.	59	2.00h	5.4h	3.58My	24	8	16.5	57	43
14 A	Community Pub. Serv.	25	1.00	4.0	1.33Ma	1	5	18.8	75	46
78 O	Conn. Lt. & Pr.	24	1.10	4.6	*1.31My	—	5	*18.3	84	39
582 S	Consol. Edison	63	2.80	4.4	*3.94Ma	8	5	*16.0	71	38
228 S	Consumers Power	56	2.40	4.3	3.38My	3	—	16.6	71	39
83 S	Dayton P. & L.	52	2.40	4.6	3.28Ma	D1	4	15.9	73	40
50 S	Delaware P. & L.	65	2.10	3.2	3.02Ma	7	11	21.5	70	33
246 S	Detroit Edison	44	2.00	4.5	2.29My	D6	3	19.2	87	47
145 A	Duke Power	46	1.40i	3.0	2.10Ma	8	11	21.9	67	46
99 S	Duquesne Light	24	1.10	4.6	*1.38Ma	D1	5	*17.2	80	34
33 O	East. Util. Assoc.	42	2.20	5.2	2.89My	11	2	14.5	76	34
16 O	El Paso Elec.	32	1.16	3.6	1.60My	11	10	20.0	73	37
12 S	Empire Dist. Elec.	25	1.20	4.8	1.67Ma	17	3	15.0	72	33
57 S	Florida Power Corp.	30	.72	2.4	1.16Ma	7	18	25.6	62	35
145 S	Florida P. & L.	52	.88	1.7	1.77Ma	12	26	29.4	50	42
4 O	Florida Pub. Utils.	21	.72	3.4	1.10Ma	D13	3	19.1	65	31
213 S	General Pub. Util.	25	1.12	4.5	*1.58Ma	4	7	*15.8	71	40
7 O	Green Mt. Power	20	1.00	5.0	1.44Ma	22	12	13.9	69	37
70 S	Gulf States Util.	31	.90	2.9	1.25My	14	7	24.8	72	37
51 A	Hartford Electric	67	3.00	4.5	*3.61Ma	D3	5	*18.6	83	40
25 O	Hawaiian Elec.	53	2.50	4.7	2.92Ma**	D3	6	18.2	86	38
94 S	Houston L. & P.	67	1.60	2.4	2.91My	4	9	23.0	55	44
30 S	Idaho Power	46	1.70	3.7	2.40Ap	NC	10	19.2	70	33
92 S	Illinois Power	39	1.50	3.8	2.35My	16	10	16.6	64	37
49 S	Indianapolis P. & L.	38	1.50	4.0	2.28Ma	7	8	16.7	66	35
31 S	Interstate Power	19	.85	4.5	1.16Ma	10	4	16.4	73	32
37 S	Iowa Elec. L. & P.	35	1.60	4.6	2.18Ap	3	6	16.0	73	40
44 S	Iowa-Ill. G. & E.	38	1.80c	4.7	2.44My	D2	—	15.6	74	43
41 S	Iowa P. & L.	34	1.60	4.7	2.13Ma	5	1	16.0	75	34
35 O	Iowa Pub. Ser.	19	.80	4.2	1.23My	6	8	15.4	65	32
15 O	Iowa Southern Util.	29	1.36	4.7	2.10Ap	9	4	13.8	65	40
61 S	Kansas City P. & L.	49	2.20	4.5	3.01My	—	5	16.3	73	38
33 S	Kansas G. & E.	42	1.48	3.5	2.61Ap	9	9	16.1	57	31
50 S	Kansas P. & L.	31	1.36	4.4	2.09Ma	5	12	14.8	65	34
43 O	Kentucky Util.	36	1.52	4.2	2.53Ma	23	8	14.2	60	40
7 O	Lake Superior D. P.	25	1.20	4.8	1.59Ma	D3	2	15.7	75	41
122 S	Long Island Ltg.	35	1.30	3.7	*1.93Ap	NC	8	*18.1	67	34
61 S	Louisville G. & E.	38	1.30	3.4	2.24Ma	7	7	17.0	58	42
11 O	Madison G. & E.	52	1.80	3.5	3.71Ma	D4	2	14.0	49	45
5 A	Maine Pub. Serv.	23	1.20	5.2	1.47My	3	7	15.6	82	40
7 O	Michigan G. & E.	69	1.70j	5.5	5.34Ma	22	10	12.9	32	37
183 S	Middle South Util.	48	1.90	4.0	2.64My	3	5	18.2	72	39
30 S	Minn. P. & L.	33	1.60	4.8	2.33My	D7	3	14.2	69	33
3 O	Miss. Valley P. S.	30	1.40	4.7	2.29My	11	5	13.1	61	33
15 S	Missouri P. S.	18	.72f	6.0	.86My	D18	3	21.0	84	30
7 O	Missouri Util.	25	1.36	5.4	1.68Ma	D3	—	14.9	82	30
44 S	Montana Power	73	2.40	3.3	*4.15Ma	11	10	*17.6	58	39
167 S	New England Elec.	20	1.00	5.0	1.31Ma	6	2	15.3	76	36
46 O	New England G. & E.	22	1.10	5.0	1.72My	13	7	12.8	64	41
98 S	N. Y. State E. & G.	57	2.30	4.0	*4.11My	21	11	*13.9	56	35
264 S	Niagara Mohawk Pr.	37	1.80	4.9	*2.13Ap	5	—	*17.4	85	28
92 O	Northern Ind. P. S.	49	2.00	4.1	2.88Ma	D5	3	17.0	69	36
155 S	Northern Sts. Power	24	1.10	4.6	1.36Ma	6	3	17.6	81	33
11 O	Northwestern P. S.	21	1.00	4.8	1.51Ma	2	2	13.9	66	32
138 S	Ohio Edison	60	2.64	4.4	3.74My	5	3	16.0	70	40
54 S	Oklahoma G. & E.	32	1.00	3.1	1.49My	10	10	21.5	67	31
26 O	Orange & Rockland Utils. ..	24	.90	3.8	*1.29De**	3	22	*18.6	70	27
17 O	Otter Tail Power	33	1.60	4.8	2.40My	8	1	13.8	67	30
535 S	Pacific G. & E.	60	2.60	4.3	3.72Ma	4	7	16.1	70	34
52 O	Pacific P. & L.	40	1.60	4.0	*2.40De	17	9	*16.7	67	30

FINANCIAL NEWS AND COMMENT

Annual Rev. (Mill.)	(Continued)	7/8/59 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% In- crease	Aver. Incr. In Sh. Earnings 1953-58	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
131 S	Penn Power & Light	28	1.25	4.5	1.65My	6	2	17.0	76	34
248 S	Phila. Elec.	51	2.24	4.4	*2.87Ap	7	4	*17.8	78	40
36 O	Portland Gen. Elec.	28	1.20	4.3	1.70My	D5	8	16.5	70	37
72 S	Potomac Elec. Pr.	27	1.20	4.4	*1.65Ma	7	7	*16.4	73	37
97 S	Pub. Serv. of Colo.	49	1.90k	3.9	2.61Ma	D3	5	18.8	73	33
344 S	Pub. Serv. E. & G.	39	1.80	4.6	2.38Ma	6	4	16.4	76	34
81 S	Pub. Serv. of Ind.	45	2.10	4.7	2.86My	4	5	15.7	73	33
32 O	Pub. Serv. of N. H.	18	1.00	5.6	1.34My	5	7	13.4	75	36
15 O	Pub. Serv. of N. M.	29	.90g	3.1	1.51Ma	22	11	19.2	60	34
27 S	Puget Sound P. & L.	34	1.44	4.2	*2.02Ma	10	12	*16.8	71	50
65 S	Rochester G. & E.	43	1.80	4.2	*2.95Ma	34	3	*14.6	61	37
9 S	St. Joseph L. & P.	33	1.50	4.5	1.91Ma	D5	2	17.3	79	34
59 S	San Diego G. & E.	26	1.04	3.8	1.64My	24	3	15.9	63	35
11 O	Savannah E. & P.	26	1.00	3.8	1.31Ap	D12	12	19.8	76	32
11 O	Sierra Pacific Pr.	33	1.40	4.2	2.10My	13	10	15.7	67	31
256 S	So. Calif. Edison	58	2.60	4.5	3.48Ma	9	9	16.7	75	36
50 S	So. Carolina E. & G.	34	1.30	3.8	1.77My	3	13	19.2	73	33
7 O	Southern Colo. Pr.	19	.90	4.7	1.53F	17	4	12.4	59	36
272 S	Southern Co.	37	1.30	3.5	1.79My	5	9	20.7	73	34
20 S	So. Indiana G. & E.	35	1.60	4.6	2.43My	D1	3	14.4	66	35
8 O	So. Nevada Power	26	1.10	4.2	1.74Ap	24	7	14.9	63	46
3 O	Southwestern E. S.	17	.64	3.8	.98My	7	x6	17.3	65	27
44 S	Southwestern P. S.	43	1.48	3.4	1.92My	10	4	22.4	77	36
32 A	Tampa Elec.	50	1.20	2.4	1.81My	7	10	27.6	66	33
168 S	Texas Utils.	72	1.76	2.4	2.83My	11	12	25.4	62	41
42 S	Toledo Edison	17	.70	4.1	1.16Ma	14	4	14.6	60	31
17 O	Tucson G. E. L. & P.	28	.76	2.7	1.08Ma	D8	12	25.9	70	47
132 S	Union Elec. of Mo.	33	1.52	4.6	*1.77De	5	6	*18.6	86	32
36 O	United Illum.	28	1.38	4.9	1.82My	19	3	15.4	76	50
6 O	Upper Peninsula Pr.	32	1.60	5.0	1.69Ma	5	2	18.9	95	32
45 S	Utah Power & Light	32	1.20	3.8	1.82My	2	7	17.6	66	44
140 S	Virginia E. & P.	36	1.10	3.1	1.68Ma	NC	17	21.4	65	40
31 S	Wash. Water Pr.	45	2.00	4.4	*2.62Ap	7	6	*17.2	76	32
142 S	West Penn Elec.	36	1.60	4.4	2.33My	5	6	15.5	69	32
77 O	West Penn Power	58	2.40	4.1	3.32Ma	D1	6	17.5	72	38
12 O	Western Lt. & Tel.	42	2.00	4.8	3.04My	11	2	13.8	66	41
28 O	Western Mass. Cos.	25	1.20	4.8	1.63Ap	2	13	15.3	74	50
119 S	Wisc. Elec. Pr. (Cons.) ...	37	1.60	4.3	2.37Ma	2	1	15.6	68	40
44 O	Wisconsin P. & L.	32	1.36	4.3	2.15Ma	5	4	14.9	63	37
43 S	Wisconsin P. S.	26	1.20	4.6	1.85Ap	9	3	14.1	65	37
Averages				4.3%		7%	7%	17.4	71%	
Foreign Companies										
215 S	Amer. & Foreign Power ..	15	\$1.00	6.7%	\$1.92Ma	D9%	0	7.8	52%	44%
129 A	Brazilian Traction	6	.25	4.0	.64De	D58	—	9.4	39	76
83 A	British Col. Pr.	39	1.40	3.6	1.95De	D16	7%	20.0	72	28
20 O	Calgary Power	94	2.00	2.0	4.46De	11	18	21.1	45	31
19 A	Gatineau Power	42	1.50	3.6	2.55De	7	9	16.5	59	35
49 O	Mexican L. & P.	15	1.00b	6.7	1.66De	D16	—	9.0	60	41
15 A	Quebec Power	39	1.60	4.1	2.34De	8	10	16.9	68	53
71 A	Shawinigan Water & Pr. ..	32	.68	2.1	1.60De	5	23	20.0	43	38

*Deferred taxes resulting from liberalized depreciation are not normalized. If they had been normalized the price-earnings ratio would be higher. **On average shares. †Stock dividends (only) are paid on the "A" shares. x—Average increase in share earnings 1952-57. D—Decrease. NC—Not comparable. A—American Stock Exchange. O—Over-the-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. b—Also 5 per cent stock dividend May 1, 1959. c—Also 5 per cent stock dividend June 10, 1959. f—Also stock dividend of one-half per cent quarterly. g—Also 5 per cent stock dividend July 1, 1958. h—Also 2 per cent stock dividend November 20, 1958, included in the yield. i—Also 15 per cent stock dividend January 29, 1959. j—Also 3 per cent stock dividend (paid each year end) included in the yield. k—Also 5 per cent stock dividend payable February 20, 1959. m—Also 5 per cent stock dividend June 15, 1959.



What Others Think

The Labyrinth of Rates

THE Cretan labyrinth that confined the Minotaur is the comparison used by some critics of the complications of modern electric service rates. Electricity is a simple, homogeneous commodity produced by similar machines, carried over similar wires, and used by similar appliances. Yet in the territory of one large eastern utility there are 24 rates used in selling it!

It has been pointed out that in earlier days the electric service industry was quite generally in the hands of the promoters, the supersalesmen who recognized that they could produce something that the public would buy. Rates were then truly promotional, urging the customer to buy.

He was not reproached for his heavy demand, his excess use, his excess load, or his poor load factor as he is today.

New uses for electricity were invented by the promoters and attractive rates were designed to cover them. Under those earlier conditions the industry grew at a fantastic rate.

In recent years, however, it has been noted that the making of rates has fallen into the hands of the engineers. True to their training they have analyzed the rate structure down to its most minute components. A company's cost to serve has been broken down on electronic computers to the cost to serve a locality, then to the

cost of serving polyphase as against uniphase customers, then to the type of voltage, and the amount of energy used. More than that. They have adjusted the rates for demand, load factor, off-peak use. And all of these must vary according as the customer is a home owner, a farmer, a small storekeeper, or a restaurateur.

If the electric customer's use does not increase each year the utilities will wear away in the wave of government power. So why do the rate men constantly engage in devising new ways to penalize him for his low load factor or his "peak responsibility"?

IT might be said that the fine distinctions of rate making serve to spread the burden fairly, to insure that each user pays his fair share of the total cost. Thus a customer might pay different rates for his small store as compared with his home across the street, both served by the same kind of kilowatt-hours from the same transformer. And when he complains of this dubious refinement he is assured that his store has a poorer load factor and a greater peak responsibility than his house, hence the difference in rate.

In short, the overall approach of some utility companies to this question is much like that of their rivals, the municipal plants. They reason, "It has cost us X dol-

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lars to produce and deliver the kilowatt-hours demanded by the public. We must spread the cost among the customers as equitably as possible. That is the only fair thing to do."

To the entrepreneurs, the developers, the salesmen, all euphemistically grouped nowadays as "market specialists," this is the wrong approach.

They feel that the business will prosper and grow powerful by selling more and more to existing customers, while constantly attracting new ones, and that this cannot be done by constantly creating new ways to penalize them.

Could this result in the water-heating business being lost by the electric utilities? Will this in turn delay the advent of the all-electric home? The natural gas companies across the nation have come awake and are going after the water-heating and home-heating business very aggressively.

It could be argued that our multiplicity of rates is the result of special promotions, efforts to increase the use of some particular group of appliances. Truly there is an element of this in present rates. Examination shows, however, that most rates have arisen from the effort to single out special groups who use the electric utility product in some manner which the rate engineers do not approve.

But is it not a fair question to ask whether the investor-owned utilities should return to the job they were started

to do? Would it be smarter to leave the penalty clauses to government power? Some generous research into new ways of using the product, with budgets larger than the token allocations now made, might also pay off.

If rate making were more influenced by the market specialists, by the men whose job it is to sell our kilowatt-hours, results revenue-wise might be most beneficial. How much are the customers willing to pay for a particular type of service? When this is ascertained production forces could then determine whether a profit can be made at those prices.

Revenues might well increase and public relations improve if the utilities were to return to a free-market standard instead of the budget approach. Bills rendered on the basis of the customer's willingness to pay, rather than his ability or his duty to pay, might be paid more cheerfully.

Regulatory commissions will probably not oppose rates based upon a willingness to pay as demonstrated by valid market surveys. Any reduction in the delays before commissions could return plenty of dollars to electric service companies.

All of which is another way of suggesting that the utilities take back the initiative, combine product research, market research, and promotional rate making into a program that will put kilowatt-hours back in the free market of America.

—J. A.

No Gas Shortage Ahead

"AMPLE supplies of natural gas for residential, commercial, and industrial uses will be available for generations to come," predicts H. D. Borger, president of The Peoples Natural Gas Company.

Mr. Borger based his opinion on a reserves report recently released by the American Gas Association and the American Petroleum Institute.

The utility official said that proved recoverable reserves of natural gas in the

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United States increased to an all-time high of more than 254 trillion cubic feet in 1958. He declared:

As has been the case for a number of years past, discoveries of gas again outpaced consumption in 1958.

A net gain of 7.6 trillion cubic feet was achieved during the year, even though net production in 1958 amounted to nearly 11.5 trillion cubic feet, a one-year figure surpassed only by the all-time peak of 11.502 trillion cubic feet produced in 1957.

ACCORDING to the AGA-API report, stated Borger, additions to natural gas reserves during 1958 totaled 19 trillion cubic feet, including 5.6 trillion cubic feet of new discoveries.

Extensions and revisions of earlier estimates amounted to 13.4 trillion cubic feet, and an increase of 58 billion cubic feet was reported in underground storage.

The nation's estimated proved recoverable reserves have increased from 173.9 trillion to 254.1 trillion cubic feet since

1948. Reserves are more than adequate. He stated:

The net gain of 80.2 trillion cubic feet was recorded despite rapidly increasing demands. Total production during the same period was 92.4 trillion cubic feet.

In view of the factual evidence presented in the AGA-API report, the public should take as unfounded any suggestions that natural gas reserves are diminishing.

No shortage of the fuel is anticipated in the foreseeable future, and based on current discovery-consumption ratios, no reserves problem could exist in even the distant future.

MR. BORGER emphasized that Peoples Gas has been an active participant in the energetic drilling program carried on by the gas industry at large. Only last year his company discovered four entirely new gas pools in the eastern section of its western Pennsylvania system. A vigorous program to find new sources of gas supply is continuing this year.

Progress of Socialism in United States

THE First National City Bank of New York, in its monthly newsletter for June, carried an interesting article, titled "The Progress of Socialism."

The steady drift of responsibility from private individuals to government has alarmed many thinking people. Not only have private citizens noted the trend toward increased government responsibility, but even government officials have remarked concerning the vast influence that the government wields over us every hour of the day. A historian has noted that there will be less and less of the "rugged individualist" and more and more of the social-minded civil servant.

Government ownership of industry, communication, and transportation facilities has never been popular in this country. However, modern welfare economics contain all the essential elements of Socialism. Business can become dependent upon government for orders, protection during time of labor strife, and for the enactment and administration of rules and regulations. Taxes may be increased to such an extent that funds may be taken away from business which should be used for self-support. Any benefits dispensed without cost become open invitations for dependency upon the government.

The terms "liberalism" and "progress-

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sivism" baffle the average European who sees these terms as other names for Socialism. British Socialist Ernest Bevin stated in 1949 that "The U.S.A. is as much a welfare state as we are. Only it is a different form."

The government in this country is of necessity large. The country itself is huge and our economic problems are complex. Interdependence of various segments of our society exists today to a far greater extent than ever before in our history. Still it is important that we keep up our guard against undue interference by the government. The term "Socialism," if viewed in its widest sense, could be defined as any interventions by the state in the free economic process.

THE first attempt in this country at community goods and common trading dates back to the Jamestown settlement in 1607—this experiment had to be abandoned to keep the colonists from starving. Modern attempts date from the first half of the nineteenth century. The early experiments in co-operative living collapsed but the "co-op" idea took root in some areas of business. The co-ops have flourished in the last twenty years due to hard work, skill, tax exemptions, and sometimes special subsidies.

Karl Marx did not believe that peaceful Socialism could be achieved and he based his "scientific Socialism" on the violent working class struggle for freedom from the domination of the Capitalists. Once achieved Marx believed that a classless society would exist, a society without "inequalities of wealth." Russia of today can make no such claims to a "classless society" or a society that is devoid of the "inequalities of wealth."

The British Fabian Society (the forerunner of the present British Labor party) as far back as the 1880's felt that

Socialism should be achieved by parliamentary means. The aim was for increasing state intervention in the economic field in order to produce the greatest happiness for the greatest number.

Socialist reformers rally around the slogan "economic justice for the masses." In practice this becomes income leveling. This "leveling" is in operation on many fronts in this country: minimum wages, Social Security, government-subsidized housing, and income taxes. The income tax system forcibly redistributes income and, according to the newsletter, this system involves "robbing selected Peter to pay collective Paul."

SUCH taxing of the successful (the higher income brackets) takes the zest from life. The government accumulates more and more dependents and the tax burden begins to shift toward the same masses the socialist state is attempting to help. In the end all turn out poorer than they would have been if gifted individuals had been stimulated to seek new and better ways to satisfy human needs and wants.

An example of continued dependence on government, once established, is the public assistance payments. In theory these payments were to wither away with **the advent of the Social Security system.** In 1958 the program amounted to \$3.4 billion—double the level of ten years ago!

Soviet Russia itself makes little use of income taxation and it may be that the speeding of industrial progress in that nation could be related to the new emphasis that the U.S.S.R. is placing on rewards for outstanding achievements.

While this nation is not willing to take Socialism as a political party, it is willing to accept fragments of Socialism under the label of "liberalism." Each year government encroachment increases: slum

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"THEY'LL GROW TO POLE SIZE IN TWENTY YEARS"

clearance projects, middle income housing, aid for distressed areas, fair trade laws to protect consumers, and federal standards for state unemployment compensation. And when such programs produce inflation we are forced to take refuge under more government protection—wage, price, and profit controls. William A. McDonnell, chairman of the First National Bank of St. Louis, has stated:

Time and time again freedom has been won by blood and lost by handouts of the people's own money—handouts usually financed by depreciation of

the currency. In the days of old Rome, these handouts were called "bread and circuses." In modern times they go by the more euphemistic term of "social welfare."

THERE is a great tendency to forget that America has risen to its present level through private incentive and achievement. Treasury Secretary Anderson has noted that the Greeks reached a point when they wanted security and a comfortable life more than they wanted freedom. The Athenians wanted to receive from society rather than give to it, and

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what they wanted most of all was freedom from responsibilities. Secretary Anderson comments that it was at this point that the Athenians ceased to be free and that they were never able to regain their freedom.

There is a strong moral obligation to help the unfortunate but we, as a nation, must not prevent honest people from getting ahead in life through handouts, excessive regulation, and oppressive taxes.

This article points out the current dangers of expanding government intervention and control. It points out the difference between the theory of Socialism and the actual governmental and sociological applications of this economic form. Most noteworthy is the observation that we, as a nation, are unwilling to take or vote for "Socialism" but we are quite willing to buy the same program if it is called "liberalism" or "progressivism."

Accelerated Depreciation Still Voluntary under New York Commission Policy

IN mid-June the New York State Telephone Association held its thirty-seventh annual convention at Scaroon Lake, New York. Over 462 people attended the three-day meeting. Of particular importance was an unscheduled, impromptu appearance at the convention of Commissioner Spencer B. Eddy of the New York Public Service Commission. He came to clarify some confusion which followed in the wake of the New York commission's declaration of policy on the subject of accounting treatment for those public utility companies which do or do not use the accelerated depreciation method of determining their federal income tax liability.

The following are the points made in Commissioner Eddy's statement: (1) Accelerated depreciation is a device to reduce income taxes. (2) It is up to management to decide whether or not a com-

pany is to adopt accelerated depreciation. (3) It is better for both the company and its customers if the company uses every legal device to reduce expenses such as taxes—this helps to keep rates down. (4) There will be no penalty for companies which continue to use straight-line depreciation for tax purposes. (5) Where companies adopt accelerated depreciation, the benefits will be shared and the commission will allow the company a somewhat higher rate of return than otherwise while authorizing lower rates to the customers.

THE statement by the commissioner should remove any fears that the New York state commission intends to penalize utility companies which do not take advantage of the accelerated depreciation provision of the Internal Revenue Law.



The March of Events

Grand Jury Probes Electrical Equipment Bids

AFEDERAL grand jury investigation has been started in Philadelphia, Pennsylvania, to consider possible indictments of electrical equipment manufacturers. The grand jury is looking specifically into charges made by the Tennessee Valley Authority that U. S. suppliers of generating equipment, such as turbines and generators, have combined or colluded in offering identical bids to TVA.

Records of some 35 companies, both foreign and domestic, which had bid on TVA procurement contracts in recent years, have been subpoenaed. With foreign companies underbidding and taking business away from American concerns, the issue of national security was raised.

Still pending is a study by the Office of Civil and Defense Mobilization on whether imports of steam-driven electrical generating equipment should be banned on national security grounds.

REA Loans Less in Fiscal 1959

BECAUSE of a drop in the number of loans made to electric co-operatives, the Rural Electrification Administration ended up its fiscal 1959 year with \$157.7 million more in funds than it expected. In fiscal 1958 REA approved \$241.6 million

in loans, but the total for the present fiscal year amounted to only \$177.2 million.

REA now has \$428 million in its electrical and telephone loan fund. The sharp decline in the number of applications for loans from REA during fiscal 1959 on the part of electric co-ops accounts for the smaller amount loaned, REA officials reported.

Telephone loans, on the contrary, rose in fiscal 1959 to set a new record. There were 224 loans made to telephone companies for a total of \$98.9 million. Included were 57 new borrowers, bringing the total number of REA-financed telephone systems to 455 commercial companies and 210 co-operatives in 45 states.

Nuclear Superheat Contracts Awarded by AEC

Two contracts have been awarded by the Atomic Energy Commission in an amount equaling \$4.3 million for work on its nuclear superheat development program. They went to Combustion Engineering-General Nuclear Engineering Corporation of Windsor, Connecticut, and General Electric Company of San Jose, California. It is hoped designs worked out by the two companies will provide the blueprints for future generations of boiling water power plants wherein nuclear super-

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heated (dry) steam is obtained by circulating saturated steam through a nuclear heat source to increase its temperature as it goes to the turbine.

AEC Suspends Sodium-Heavy Water Reactors

RESEARCH and development were ordered suspended for an indefinite period on a sodium-heavy water nuclear reactor project in Anchorage, Alaska, because of many unresolved problems that cast a doubt on the economic feasibility of this

type of reactor concept. Even if the technical problems of this concept were solved successfully, the AEC declared, the cost of power produced by the system as presently understood would not be lower than that produced by other natural uranium power reactor systems. Sodium-heavy water designs as used in other reactors will continue to be worked on, the AEC reported. If and when this kind of nuclear technology becomes sufficiently developed, the AEC will re-evaluate the concept to assess its technical feasibility and economic potential.

California

Property Assessment Bill Enacted

GOVERNOR Brown has signed into law a bill that requires publication of heretofore secret ratios between assessed value and market value of common property in all of the state's 58 counties.

Opponents of the measure, which was sponsored by Assemblyman Glenn Coolidge, contend that publication of the county assessment ratios will mean a shift of taxes from utilities to common property. Proponents of the act say it will not.

Both groups are reported to agree on one major feature of the law—repeal of

an inoperative 1949 law that required equal assessment of utility and other property.

A committee headed by Coolidge found during a two-year study that the state assessed utility property at 50 per cent of historical value, while the counties assessed common property at 25 per cent of market value. This disparity was the basis for multimillion-dollar lawsuits filed by railroads for recovery of taxes. Utilities contend that the state Constitution requires equal assessment.

It is hoped the new law will clarify and revamp assessments on a more equitable basis.

Florida

Domestic Manufacturer Favored

THE Florida Power & Light Company, the state's largest electric utility, has purchased a 300,000-kilowatt steam turbine generator unit from General Electric Company's large steam turbine generator department.

According to the Florida utility, bids had been submitted by both domestic and

foreign manufacturers for a smaller 240,000-kilowatt unit, but a reappraisal of the future electric power load requirements indicated a larger unit was needed.

The unit sold by General Electric is scheduled for delivery in the spring of 1962, and "is larger than any that the foreign concerns could deliver" by that date, according to Florida Power & Light Company. (See, also, page 227.)

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Rate Hike Granted

TAMPA ELECTRIC COMPANY has been granted its second rate increase in thirteen months. The Florida Railroad and Public Utilities Commission said the company could boost its rates on August 1st in an amount which would provide additional annual revenue of \$1,585,000.

The commission, in granting the increase, admitted that it had erred last year in not granting a larger increase. This necessitated the additional increase recently

approved. A previous ruling by the commission had set the earnings rate of Tampa Electric at 6.74 per cent. Present rate of the company is only 5.81, but with the new increases the earnings should give the company 6.5 per cent on its investment.

Tampa Electric said it did not ask for rates that would give it the full return of 6.74 per cent to which it was entitled, but that it expects to overcome the difference by further operating economies and reduced fuel costs.

Kansas

Underground Gas Storage Planned

IN south-central Kansas the Northern Natural Gas Company is planning to develop the nearly depleted Otis field for underground storage of gas. Permission has been asked of the Federal Power Commission to proceed with the project.

Northern Natural plans ultimately to store approximately 182 billion cubic feet of natural gas in this field. By 1962 the

field will be capable of delivering 245 million cubic feet of gas a day and in 1963, when fully developed, it will be able to deliver 350 million cubic feet daily.

The estimated cost of facilities for the development and operation of the field is about \$20 million. Northern Natural is presently acquiring rights on 26,000 acres of land over the storage area. When completed the actual storage facilities will comprise about 17,000 acres.

Kentucky

Wholesale Rate Hike Suspended

ALL but \$8,500 of a proposed \$6,986,000 wholesale gas rate increase filed by the Texas Gas Transmission Corporation of Owensboro, Kentucky, has been suspended by the Federal Power Commission. Texas Gas had asked that the higher rates become effective on July 6th, which would have affected 61 wholesale customers in

eight states, Arkansas, Kentucky, Louisiana, Tennessee, Mississippi, Illinois, Indiana, and Ohio.

In suspending the company's proposal, the FPC asserted that the claimed increase in the cost of gas from Texas Eastern Transmission Corporation appeared to be based, in part, on increases which are already suspended or which are in effect subject to refund.

Maine

To Appeal Rate Case

THE Central Maine Power Company is appealing a recent decision of the

Maine Public Utilities Commission in which the company was granted only 29 per cent of the amount of increase asked

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for. Central Maine President William F. Wyman declared that the amount requested by his company was based on the minimum of additional revenue needed to properly cover the needs of the business.

He said that although the commission had approved the purchase and mergers that gave the company additional proper-

ty, saying they were in the public interest, the commission would not approve these same acquisitions for rate-making purposes.

This question, as well as others, Wyman said, will form the basis of his company's arguments in its appeal to the state supreme court.

New Jersey

Rate Study Group Formed

A MUNICIPAL Public Service Co-ordinating Committee has been formed to investigate utility rate increases in New Jersey.

The committee, made up of representatives from five New Jersey shore municipalities, describes itself as an "inter-community authority." It said its purpose is to view and analyze matters of utility rates and public services and make recommendations for action by member communities.

Chairman of the group, Charles S. Call-

man, a councilman from Rumson, New Jersey, stated:

We have not organized to attack every rate increase, but rather to act in a public relations capacity—a liaison—between the utilities and the public.

Experts would be obtained by the committee to study rate boost proposals. Increases which are deemed reasonable would be explained to the public. If they are not considered reasonable, the committee will hire legal counsel to oppose the proposed boost in the name of all the member communities.

New York

History-making Railroad Rate-making Concept

THE public service commission of New York gave its blessing recently to what could be a history-making concept of

railroad rate making. It approved a tariff filed by Delaware, Lackawanna & Western Railroad which establishes reduced, "guaranteed" rates for shippers contracting with it for total movement of their goods.

Pennsylvania

Novel Commuter Plan Advanced

MAYOR Dilworth of Philadelphia has announced a plan to rehabilitate the railroad lines that carry 100,000 commuters daily into the city. Under it Philadelphia would form a nonprofit corporation composed of representatives of the city, the railroad labor unions, and the two railroads involved—the Pennsylvania and the Reading.

This bold new solution to the area's transit problems immediately ran into a roadblock in that the railroads informed the city that it was not possible to give up ownership of the commuter lines, inasmuch as they were covered by bonded indebtedness and thus could not be sold.

However, the railroads indicated they were in favor of the corporation scheme in principle. They suggested, as an alternative, that perhaps permission might be giv-

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en them to charge high enough commuter fares to pay present costs or else furnish specified service that the city and suburban communities would subsidize.

Philadelphia for the last six months has been subsidizing increased frequency of trains on the part of the Reading and the Pennsylvania in "Operation Northwest" to the tune of \$160,000. Traffic on the two lines in the experiment increased 20 per cent, but whether this was due to the better service or the 40 per cent fare reduction is impossible to determine.

Underground Gas Storage

A THREE-COMPANY underground gas storage project has been begun in north-central Pennsylvania. Leidy and

Tamarack gas fields are being used which are about 15,000 acres in size. Upon completion, the gas storage pool should be among the largest in the nation, with a capacity of more than 105 billion cubic feet.

Only Transcontinental Gas Pipe Line Corporation is using the underground facilities at this time, pumping more than 120 million cubic feet a day into the pool. Plans call for a storage inventory of about 27 billion cubic feet by the time the winter heating season starts.

Texas Eastern Transmission Corporation and New York State Natural Gas Corporation, builder and operator of the station, will develop their share of the gas reserves when the market requirements dictate such action.

Texas

Gas Facilities Authorized

THE Transcontinental Gas Pipe Line Corporation of Houston, Texas, has been authorized by the Federal Power Commission to build and operate natural gas facilities estimated to cost about \$29.5 million. They are part of a larger project proposed by the company which would

cost about \$77 million and which would provide 156 million cubic feet of gas daily. This added capacity would be used to meet increased requirements of present customers and to provide transportation service for 50 million cubic feet of natural gas daily to Consolidated Edison Company of New York.

Virginia

FPC Told Area Wants Gas

AT a hearing before the Federal Power Commission on an application by the Blue Ridge Gas Company of Harrisonburg, Virginia, to distribute natural gas in Rockingham county, examiner in the case was told by a Rockingham businessman that an overwhelming majority of the county residents wanted natural gas. He said they felt availability of the fuel would help the area attract new industries. In fact, he cited an instance where a new industry decided to locate in another county largely because of the lack of gas.

The Blue Ridge application has been contested by the Virginia Petroleum Jobbers Association. On appeal to the United States court of appeals in the District of Columbia, the case was remanded to the commission. In June, 1958, the FPC denied intervention by the jobbers' association. It directed that the Atlantic Seaboard Corporation, the gas supplier, deliver up to 779,584,000 cubic feet of natural gas yearly to Blue Ridge.

The jobbers then appealed and the court set aside the commission's orders and ordered another hearing in which the jobbers would be permitted to act as interveners.



Progress of Regulation

Trends and Topics

Use of Year-end Rate Base to Offset Effects of Inflation

THE problem of combating inflation, faced by public utility companies and regulatory authorities, has been attacked by various means, such as additions to the rate of return and consideration of increased costs which are sufficiently definite. Several commissions, with the approval of some courts, have used a year-end rate base rather than an average rate base. Other commissions have adhered to the use of averages over a test period. Many recent cases deal with this question.

Reasons for Year-end Rate Base

The Arizona supreme court upheld a lower court's decision that original and reproduction costs at the end of the test period should be used. Average costs, average earnings, average customers, et cetera, over the test period may be necessary in order for the commission to get a fair earnings picture, as such a test-period method avoids seasonal peaks and valleys in a utility's operations; but in finding fair value the only relevant cost figure "is that computed at the time of the inquiry, or as near as possible thereto" (27 PUR3d 412).

A year-end rate base rather than a rate base related to average investment for the test period was approved by the Virginia supreme court where a company was confronted with a large expansion program, since such a rate base tends to offset the lag in the return of earnings during the period between the time the money is invested and the time earnings are received (8 PUR3d 120). That ruling upholds the practice approved by the commission when it fixed rates for Virginia Electric & Power Company (9 PUR3d 225) and Chesapeake & Potomac Telephone Company of Virginia (21 PUR3d 239).

The Maryland court of appeals on June 29, 1959, upheld a decision by the state commission (24 PUR3d 247) approving a year-end rate base for an electric, gas, and steam company engaged in a substantial plant improvement program. The court said that conditions in recent years have persuaded regulatory agencies to include property estimated to be in service by the end of the test year. Conditions that have prompted this practice are inflation, attrition, and regulatory lag. The court said that since the end of the last World War rates

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designed to give a certain return did so only for a short period and then became inadequate as rising prices, wages, and taxes took their toll. *Baltimore Gas & E. Co. v. People's Counsel et al.*

The District of Columbia commission has approved an end-of-period net investment rate base as a means of offsetting the adverse effect of attrition. The commission, in the recent rate case involving the Potomac Electric Power Company, said that a number of other regulatory bodies had likewise adopted the end-of-period rate base for this reason. The commission was interested in fixing rates that would be just and reasonable for a future period. Average investment was said to be proper for determining the reasonableness of the level of earnings for a past period, but use of average investment in fixing rates for the future would have to be based on the assumption that increases in plant investment would produce an approximate proportionate increase in earnings. This assumption loses validity when large new investments must be made at prices substantially higher than the average cost of existing plant (28 PUR3d 206). The end-of-period rate base had also been approved by the same commission in fixing rates for the Washington Gas Light Company (24 PUR3d 417).

The Florida commission has approved a year-end rate base where a company was engaged in an abnormal expansion program during a period of rapidly rising prices, although the commission said that a rate base should be predicated on average investment for the test period where there is little fluctuation in a utility's investment accounts from the beginning of the year to the end of the year (99 PUR NS 129). The commission, in a more recent case, approved a telephone company's year-end investment rate base (10 PUR3d 60).

The words "value of the property used in the public service" in a statute relating to the rate base, according to judicial decisions in New York state, mean "present" value (8 PUR3d 229; 12 PUR3d 399). Similarly, in Pennsylvania it has been said that a utility is entitled to a return on the fair value of its property at the time rates are established or at the time the value is in issue (24 PUR3d 9; 25 PUR3d 273). The Pennsylvania commission said that it has adhered to the fixed practice of determining value as of a certain date (25 PUR3d 93).

Year-end rate bases have also been approved in Delaware (8 PUR3d 286), Idaho (23 PUR3d 194; 26 PUR3d 562), Illinois (24 PUR3d 209), Missouri (22 PUR3d 399), Montana (79 PUR NS 88), New Hampshire (98 PUR NS 187), Ohio (9 PUR3d 296), Texas (15 PUR3d 130), and Wyoming (27 PUR3d 259).

Approval Dependent on Various Factors

The Arkansas commission has said that the rate base should reflect the latest substantiated expenditures, particularly in a period of inflation, when a company has experienced an attrition of earnings (2 PUR3d 1). But the commission refused to accept year-end figures of plant investment where a company made no estimate of the year-end level of revenues and expenses (7 PUR3d 561; 7 PUR3d 594). The commission, in fixing rates for Arkansas

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Louisiana Gas Company, used a rate base representing beginning and ending year balances rather than year-end figures (10 PUR3d 407).

Where the income and expense figures of a gas company were normalized as of the end of a test period, the Massachusetts commission required that a year-end rate base be used (11 PUR3d 195). The same commission approved an average of net investment rate base valuations for the beginning and end of a test year in a later case (13 PUR3d 401).

The Oklahoma commission expressed the view that an average rate base should be applied to a company which makes only nominal net additions from year to year, although a year-end rate base may be used for a growing company which is making substantial additions to plant (17 PUR3d 422).

The Kansas commission in one case allowed an electric company to use a year-end rate base. The commission said that historically it had generally used an average rate base but it recognized that some states used an end-of-period method. In examining the record, the commission also had available the showing of the average rate base and its determination was not to be considered as an unqualified approval of the use of the end-of-period rate base only (23 PUR3d 45). The commission more recently decided that the latest 12-month period of operations should be used since it embraced a full year and eliminated seasonal fluctuations in operations which often exist in a shorter period. The commission said that estimates and prophecies, even when honestly presented, are not as reliable as actual operating experience based upon a calendar year (27 PUR3d 128).

In South Dakota it was said that while a year-end net investment rate base is not strictly correct in determining rates for the future, it affords a hedge against inflation; but to test the adequacy of rates already in effect, net earnings must be referred to an average rate base (23 PUR3d 321).

The Wisconsin commission said that a rate base customarily is determined from average plant values, but where there are no important additions during a test period, the plant values at the end of the period can be used (3 PUR3d 65). The commission later adopted the going level at the end of the current year in a telephone rate case (23 PUR3d 388).

The use of an average rate base instead of a year-end rate base was upheld by a court in Rhode Island, although the administrator had used a year-end rate base in previous cases (25 PUR3d 54). Plant figures at the end of a seven-month test period had been adopted in a case involving New England Telephone & Telegraph Company (21 PUR3d 178).

Addition to Year-end Rate Base

The New Jersey commission, in fixing rates for New Jersey Bell Telephone Company, added 5 per cent to the cost rate base as of December 31, 1957, in order to offset the effects of inflation. The commission considered alternatives such as an increment in the rate of return, reproduction cost, and trended original cost, but it found "serious defects" in these proposals (24 PUR3d 181).

The New Jersey supreme court remanded the case for further findings on the ground that the commission did not reveal what corrective factor the com-

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mission intended by including the average increase in net plant investment for the year following the test year. The court, however, recognized the right of the commission to exercise discretion without being bound by any particular formula. (See PUBLIC UTILITIES FORTNIGHTLY, July 16, 1959, page 176.)

The commission had previously approved a year-end rate base proposed by a telephone company where operating results were based on the number of customers and expense levels at the end of the year (11 PUR3d 40). But in another case the commission held that a telephone company choosing to base its operating results on the average number of telephones in use should use an average rate base (14 PUR3d 212).

Approval of Average Rate Base

The Federal Power Commission, in approving an average rate base for the United Fuel Gas Company, said that a rate base computed as of one point in time is not a proper measure of the investment which produces revenues over a period of time, or which will be required to produce a volume of annual sales by a company which has experienced and still anticipates growth. A precise measure of the plant used to produce a specific annual sales volume, said the commission, would be an average of the daily plant balances for the year, but such precision is unnecessary in the ordinary case where additions are relatively small or evenly spaced. Additions to plant had been made uniformly through the year (100 PUR NS 405).

The Michigan commission has used average plant in use during the test period as being more closely related to operating and earnings performance during that period (9 PUR3d 321; 22 PUR3d 369). The commission said that if a rate base is predicated on year-end figures the only income statement which would be relevant to that rate base would be one of a strictly pro forma nature to reflect revenues, expenses, depreciation, and taxes on the same year-end level of operations, a procedure which would involve numerous estimates (22 PUR3d 369).

The West Virginia commission in fixing rates for the United Fuel Gas Company said that "although some sister states, such as Ohio, Maryland, and Pennsylvania, take into account fair value or reproduction costs in fixing the rate base, this commission generally uses the net original cost method . . ." The commission then referred to the fact that more than two years had expired since the end of the test period and it was necessary to make adjustments to reflect known facts which would be operative at the time the rates fixed in this case were effective. The commission was without authority to make rates retroactive and, because of the so-called regulatory lag between the test period and the time when new rates were placed into effect, the company contended that the use of an average rate base for the test year did not accurately reflect the plant account at the time of the effective date of the rates and that the year-end balance should be used for all functions except transmission and storage. The commission said it had carefully considered the contentions, but it was not disposed to depart from its practice of using average balances except for unusual circumstances (27 PUR3d 365).

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Use of an average rate base rather than a year-end base has also been approved in Maine (14 PUR3d 405), North Dakota (22 PUR3d 505; 24 PUR3d 62), Texas (2 PUR3d 265), and Washington (9 PUR3d 174).

Review of Current Cases

Capital Cost and Policies of Parent System Control In Subsidiary Telephone Rate Case

THE Florida commission granted General Telephone Company of Florida a rate increase of about 10 per cent. This was about one-fourth of the increase requested by the company on the basis of a proposed 7.25 per cent rate of return.

Rate Base Adjustments

Plant in service and depreciation reserve were acceptable as proposed by the company. Plant under construction, however, was excluded from the rate base. If it were included, consideration would have to be given to anticipated revenues and expenses growing out of its operation, the commission noted. Accounting rules permit the utility to charge interest on investments in plant under construction until such time as the new plant is put into service and revenue is earned.

Property held for future use was excluded from the rate base on the ground that it may not be placed in service in the near future. Rental income from this property was, accordingly, eliminated from operating revenues.

The lag in income tax payments offsets most of the working capital requirement. This lag would provide the company with about 50 per cent of the income tax accruals.

Service Contract Expense Disallowed

Since the company recently became a part of the General Telephone System, it

has incurred a substantial expense item arising out of a service contract with one of General's subsidiary corporations. Although the staff questioned this item, the company failed to justify any part of it. The commission observed that this service charge could probably be justified, at least in substantial part, in future cases. However, as the present record did not support it, the commission was compelled to disallow the claim.

Capital Cost and Rate of Return

Because General Telephone of Florida has become an almost wholly owned subsidiary of General Telephone Corporation, it can no longer be viewed as an independent company competing in the money market for investment capital, the commission pointed out. The company will no longer have to sell common stock in the competitive market. Moreover, financing policies apparently will be dictated by the parent company, and the cost of capital to General Telephone of Florida will be the result of investors' appraisal of the earnings of the system of which it is a part, and not the earnings of an independent utility.

The applicant's witness indicated that the bond ratio should not exceed 45 per cent, though the average bond ratio of all the companies of the system averaged 54 per cent. The applicant proposed a dividend pay-out of about 66-2/3 per cent. The average pay-out of General subsidiary

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companies is about 73 per cent. The applicant also proposed earnings of 10.50 per cent on common equity. Average earnings of system companies were slightly higher.

At first glance this proposal for earnings would not appear to be unreasonable, the commission said, until the position of the applicant is compared with the system companies. An analysis showed the percentage of retained earnings to total capital to be 2.23 for General Telephone of Florida and 1.01 for the system companies.

Using the average capital structure of the applicant for five calendar years, a cost rate of 6.56 per cent was derived for total capital. After determining the portion of total capital applicable to the rate base, the commission arrived at a return of 6.68 per cent on the rate base, which it considered adequate.

Return as a Whole

In fairness to the public and the company, the commission felt that it must base the rate increase for local exchange service on the overall operations of the company. If exchange operations were con-

sidered to the exclusion of state and interstate toll, then the utility's return would be below the level found to be required. If the exchange and the state toll were considered together, then the company's overall return would be in excess of a reasonable return.

Service Questions Rejected

The commission refused to consider a number of complaints about the quality of service. While it was sympathetic to the apparent attitude of protestants that service and rates are quite inseparable, it pointed out that its action must be governed by a state supreme court decision (3 PUR3d 145) which holds that the rate-making power must be exercised entirely separately from the power to hear and decide questions relating to service adequacy. *Re General Teleph. Co. of Florida, Docket No. 5509-TP, Order No. 2741, April 3, 1959.*

Upon request by the company for reconsideration, the commission reaffirmed its decision in this case. *Re General Teleph. Co. of Florida, Docket No. 5509-TP, Order No. 2741-A, May 18, 1959.*



Rolled-in Cost Basis Required for Pipeline Rates For Extended Service

THE Federal Power Commission authorized Trunkline Gas Company to sell up to 135,000 Mcf of natural gas per day to Consumers Power Company of Jackson, Michigan. This gas will be resold in some 300 Michigan communities. Michigan Gas Storage Company obtained authority to transport part of the Trunkline gas for Consumers between market areas. Applications of several independent producers proposing to deliver gas to Trunkline from Texas and Louisiana fields were also approved.

Trunkline will increase its system capac-

ity from 375,000 Mcf per day to 510,000 Mcf per day by partial looping of existing main lines and by additional compression. It will extend its system about 200 miles from Tuscola, Illinois, to the Michigan-Indiana border, where connection will be made with transmission facilities to be constructed by Consumers. Trunkline's proposed construction, costing some \$81 million, was found to be feasible.

Assuming the extended service to begin January 1, 1960, the deliverability life of Trunkline's gas supply will be a maximum of thirteen years and a minimum of

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eleven and one-half years. While this is minimal, the commission considered it reasonably adequate. There was no question of the adequacy of the market.

Allocation Issue Rejected

The examiner had found that Trunkline, by proposing to render service only to Consumers, was indirectly attempting to assume allocation functions of the commission. He thought customers of Trunkline and Panhandle (Trunkline's parent corporation) should be permitted to show their needs for additional gas in order to get their fair share of any expanded capacity.

Since, in his view, the additional facilities required to meet all customers' needs would be far in excess of Trunkline's present proposal, he concluded that the applications in this proceeding must be denied.

The commission ruled, however, that the fact that there may be a need for gas in markets other than those which Trunkline proposed to serve, and that others who were not parties might need additional gas supplies, is no justification for denying the applications in this proceeding.

Trunkline's Proposed Rates

The average proposed charge for gas delivered to Consumers was 45.75 cents per Mcf (at 100 per cent load factor) and was based upon the entire incremental cost of Trunkline's proposed project. Schedule P-2 provided for a monthly demand charge of \$3.57 per Mcf of contract quantity and a commodity charge of 34 cents per Mcf. It also provided for an annual minimum bill equal to the sum of the monthly demand charges plus a commodity charge based upon 95 per cent use of the annual contract demand. Schedule R-2 related to gas which Trunkline may sell to Consumers in excess of the latter's purchases under Schedule P-2. The rate

under Schedule R-2 was proposed at 45.75 cents per Mcf.

Trunkline's rate to its parent, Panhandle, at Tuscola, Illinois, is about 27 cents per Mcf. The price differential results from the assignment of all incremental costs of the proposed project to the gas to be delivered to Consumers. Trunkline's existing and proposed facilities will constitute an integrated pipeline system, and the costs associated with the additional facilities and new gas supply cannot be regarded as being for the exclusive benefit of any one customer, said the commission. The looping of existing lines will bring increased reliability and flexibility of operations. These changes will benefit the Panhandle-Trunkline system as an integrated whole.

The commission, therefore, ordered the Trunkline certificate to be conditioned to provide for rates based on rolled-in costs, except for the line constructed beyond Tuscola, the cost of which was assigned to the gas for Consumers. The commission limited the demand charge at the Michigan-Indiana border to \$3.05 per Mcf of contract demand and the commodity charge to 30 cents per Mcf for firm gas, with a rate of not more than 40 cents per Mcf for excess gas sold on a when-available basis. Instead of the 95 per cent annual minimum bill proposed by Trunkline, the commission provided for an annual bill of not more than the sum of the monthly demand charges plus a commodity charge based on 75 per cent use of the contract demand.

Producer Rates Approved

The only question relating to the applications of the producers was the proposed price. Contracts were negotiated at arm's length, providing for an initial price of 20 cents per Mcf in Texas (Commission District No. 3) and 22 cents per Mcf in

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Louisiana (Cameron and Vermilion parishes). The examiner had found that these prices—or the differential between these prices and existing contract prices to Trunkline—were the cause of Trunkline's proposed incremental cost rate to Consumers. Since he had found such incremental cost rate contrary to the public interest, he could not accept the producer prices.

The commission overruled the examiner. There was no evidence that Trunkline could have contracted for gas at lower prices. The effect of the examiner's reasoning, said the commission, is to require a producer in a certificate case to show, at his peril, that the rates which a pipeline purchaser proposes to charge on resale are required by the public convenience and necessity—an impossible burden upon the producer. The commission recognized that field price was the only feasible standard available in initial price cases. Since the commission had certificated similar sales in Louisiana, it had no difficulty in authorizing the Louisiana sales here proposed at 22 cents.

But the highest prices previously cer-

tificated in Texas are 17.5 and 18 cents. After discussing various factors bearing on producer prices, the commission concluded that the Texas sales should be certificated at the proposed price of 20 cents. The record indicated that Florida Power & Light Company has contracted to buy gas in the area for 19.5 cents and that demand is currently strong at 20 cents. Certification at this level appeared necessary if the large reserves of the area were to be preserved for the interstate market. The commission emphasized, however, that if the Texas contracts had not contained a provision for a 10-year firm price, the 20-cent price would not warrant certification. The commission warned that it would closely scrutinize any such proposed sales in the area under contracts which provide for price escalations or redeterminations above 20 cents within a period of five years.

Commissioners Connole and Kline separately concurred in part and dissented in part. *Re Trunkline Gas Co. Docket Nos. G-15394 et al. Opinion No. 321, May 22, 1959.*



Bond Issue for Nuclear Power Plant Authorized

THE Securities and Exchange Commission authorized the issue and sale of bonds and notes by Yankee Atomic Electric Company, a subsidiary of New England Electric System. The bonds were being issued principally to finance a nuclear power plant being constructed by Yankee.

This company had been created primarily to obtain for sponsoring companies knowledge in the design, construction, and operation of a nuclear power plant, together with the benefits of continuing research and development in that field. The plant would consist of a nuclear reactor of the pressurized-water type, together

with conventional-type electrical generating, transformation, and auxiliary equipment. The entire electrical output of the plant would be sold, directly or indirectly, to the sponsoring companies in proportion to their holding of Yankee's capital stock.

The bond issue was exempted, under the third sentence of § 6(b) of the Holding Company Act, from the requirements of §§ 6(a) and 7 since the bonds were being issued and sold solely for the purpose of financing the company's business and had been expressly authorized by the state commission (Massachusetts) of the state in which the company was organized and doing business.

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Exception from Competitive Bidding Requirements

The issue and sale of the bonds were also excepted from the commission's competitive bidding requirements. In discussing the company's request for an exception, the commission pointed out that the company was undertaking a project new and untried in character, that its capital structure, the terms of debt securities to be issued, and the terms of the various contracts to be entered into between Yankee and its sponsoring companies were required to take a form and include provisions which would be acceptable to possible purchasers of the securities. Furthermore, the cost of money to Yankee was, in large measure, directly related to the terms of the securities and the nature of the con-

tracts with the sponsoring companies. The commission believed that these matters were of such a nature as to require direct negotiations between Yankee and potential purchasers.

Moreover, in view of the experimental nature of the project, the commission believed it desirable that the securities be placed with private institutions which could closely follow the progress of the project so that, in the event that further developments, now unforeseen, necessitated a change in the terms of the indenture or the bank credit agreement, it would be possible to contact the lenders and agree upon a solution. This would not be feasible if the securities were held by the general public. *Re Yankee Atomic Electric Co. et al. File No. 70-3753, Release No. 14025, June 12, 1959.*



Accelerated Construction Program Basis for Telephone Rate Increase

THE Washington commission authorized West Coast Telephone Company to increase rates to enable it to improve its financial structure and procure new capital in such amounts as to accomplish an accelerated construction program to meet pressing service requirements. The new rates were calculated to yield a return of 6.46 per cent. This allowance was deemed reasonable in view of an earlier decision (27 PUR3d 238) wherein the commission had found that a fair rate of return for the company ranged between 6.25 per cent and 6.50 per cent.

In the earlier case the commission had referred to the company's increased service responsibility caused by the rapid growth in population. Also, the commission had recommended an accelerated construction program to meet the ever-increasing demands for service. Evidence presented by the company showed that as

of the end of 1958 there were 673 outstanding applications for main stations. At the same time applications for upgrades numbered 4,717.

In recognition of this backlog of applications for regrades and heeding the commission's admonition with respect to service improvements and expansion, the company submitted an estimate of construction expenditures for 1959 and 1960 which would be required to effect sizable enlargements of base rate areas, eliminate all held orders, enable the company to fill new applications for main service or regrades, and in general keep abreast of subscriber requirements. The gross dollar amount thereof was estimated at \$10,585,000. Outside capital in the approximate amount of \$7 million would be required to carry out this accelerated program. The company committed itself to this program provided its tariff filing received approval.

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Pro Forma Adjustments

Exhibits showing operating expenses and revenues were submitted on a pro forma basis. Further pro forma adjustments for the effect of a recent wage increase and the effect of the accelerated upgrade activities were also made. The commission made special note of the position of a staff witness that under ordinary circumstances no pro forma adjustment need be made to reflect the effect of normal regrade activity, but that the regrade activity presently contemplated was of such unusual proportions that pro forma adjustments should properly be made therefor.

The commission also pointed out that the company has committed itself to the carrying out of the program. It said that it could not escape the fact that because of this, a decline in rate of return would result unless pro forma consideration were given to the effect of that program.

Return Allowance

The commission was aware of the fact that the indicated pro forma rate of return of 6.46 per cent was somewhat below the upper limits of the rate of return which

it had indicated the company should be permitted to realize in view of its pressing service requirements. But it was also aware of the fact that the very nature of the rate-making processes does not always lend itself to micrometer precision in measuring future operating results under such circumstances as were presented in this case.

It said that it was not impossible that the entire regrade activity for which it made pro forma adjustments would not be accomplished in a 12-month period. Likewise, the effect of the 1959 wage increase program would not be reflected in its entirety until late this year. The commission believed that both these factors could have the effect, for a limited period of time, of increasing the realized rate of return somewhat above the upper limits previously mentioned. It concluded, however, that the new rates would enable the company to earn on the average a rate of return approximating the upper limits of that range during the foreseeable future. *Washington Pub. Service Commission v. West Coast Teleph. Co. Consolidated Causes Nos. U-9037, U-9116, June 2, 1959.*



Bare Assertion That Commission Order Is Unreasonable Not Sufficient for Injunctive Relief

THE Montana supreme court affirmed a lower court's denial of a temporary injunction against a commission order denying a telephone company a rate increase. Although the lower court had power, upon a proper showing, to grant such injunctive relief, whether the commission's order increased or decreased rates or denied an increase, a bare assertion that the commission's findings were unlawful, unreasonable, and confiscatory was not sufficient to justify invoking the court's general equity powers. There had been no showing of impairment of the

company's capital or of its financial integrity. The affidavits annexed to the company's complaint showed that it had earned only 4.73 per cent for the year ending March 31, 1958. But the commission's order showed that the existing rates produced 5.56 per cent for the year ending June 30, 1957. On this showing, the court, in the exercise of its discretion, properly denied the temporary injunction. There had been no clear and convincing evidence to overcome the presumption in favor of the commission's order.

The court pointed out that while the

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company had alleged that its earnings had declined steadily since 1953, it had taken no action for four years to remedy the situation. Now, it had attempted to invoke the equity power of the court on the

ground that its remedy at law was not plain, speedy, and adequate. *Mountain States Teleph. & Teleg. Co. et al. v. Montana Pub. Service Commission et al.* 338 P2d 1044.



Purchased Gas Cost Adjustment Clause Disapproved

THE Montana commission, in granting a gas company a rate increase which would produce a return of 6 per cent on a fair value rate base, disapproved a purchased gas cost adjustment clause. The clause would have allowed automatic upward or downward revisions of rates in proportion to increases or decreases in the future cost of gas purchased by the company.

While the commission would have the power to approve or disapprove any future revision of the gas supply contract, the commission noted, a change in the wholesale price does not always require a similar adjustment of consumer rates. It was possible that the company, at some future time, could absorb an increase in the cost of gas. Conversely, the situation could arise where it could not afford to decrease its rates after a downward contract change.

The commission felt that an investigation and hearing should be conducted before imposing new rates upon the consumers, and the public should have the opportunity to present its views.

Handy-Whitman Index

On other aspects of the case, it seemed to the commission that adjustment of actual figures for known and determined factors provided a more satisfactory basis than estimates for a projected period.

In examining trended original cost figures, which had utilized the Handy-Whitman Index, the commission was satisfied from the evidence that the indices

provided a high degree of accuracy for the trending, or translation, of costs into "present-day" dollars. Protestants had argued against the first-in, first-out theory in applying retirements to the plant account.

The commission, however, noted that it was the accepted method which had been recognized in previous cases.

Rate Base Elements

The company's materials and supplies allowance was adjusted downward to exclude materials regularly used for construction. Also adjusted downward, in computing trended original cost, was the value of land which had appreciated substantially over the original cost price. Value is relative, said the commission, and it should be realized that the company would utilize the property for utility functions and not hold it for speculative purposes.

In prior cases, land and land rights had been carried at their original cost in the computation of the reproduction cost new less depreciation. The commission felt that consistency demanded the same type of treatment in the present case.

In determining the fair value rate base, the commission took into consideration original cost, original cost less depreciation, and trended original cost depreciated. While the computation of trended original cost differs in method from that used in reproduction cost, the commission said, the general theory is the same and it deserves the same measure of reliability.

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Employee Retirement Program

The company had added an item to expenses for the estimated annual cost of its proposed employee retirement program. Protestants contended this expense should not be allowed until the program actually was placed into operation. They also argued that the cost of the program was inflated by payments which would be made to four employees who were beyond retirement age, and by other payments required in the first year of the program to build up the necessary funds.

The costs of the program are definite and the plan has been well formulated, commented the commission. The expense would not be disallowed simply because the plan was not yet in operation. To deny it would only mean that a future rate adjustment would have to be made when the program took effect. The commission thought that the company had taken a commendable attitude in providing for those workers who had already reached the age for retirement.

Weather

The company had adjusted its operating revenues downward to reflect gas sales for a normal weather period. This was done by comparing the total number of "degree-days" in 1957 with the annual average for the area for the past thirty years. It was found that 1957 exceeded the average by 2.6 per cent and appropriate revision was made in the revenues for this colder-than-average weather.

While the commission doubted that such a thing as "normal" weather existed in Montana, it recognized that the formulation of gas rates should be based upon average weather because of the sharp effect periods of abnormal weather have upon gas revenues. The use of "degree-days" is a well-recognized method, said the commission in accepting the adjustment. The cost of gas purchased by the company also was reduced proportionately for this weather adjustment. *Re Great Falls Gas Co. et al. Docket Nos. 4693, 4697, Order No. 2759, June 19, 1959.*



More than One Basis for Standing as a Party

THE U. S. court of appeals held that the Federal Communications Commission erred in denying a television station licensee's petition to intervene in a proceeding involving another construction permit. The petitioner, holder of a Channel 10 permit at Scottsbluff, Nebraska, had first filed a mutually exclusive application for permission to construct a Channel 13 television station at Alliance, Nebraska, 40 miles away. Subsequently, the petitioner asked the commission's permission to enlarge its facilities at Scottsbluff and stated that, if the permission were granted, it would not object to the dismissal of its Alliance application. The requested permission was granted, and then the petitioner sought to intervene in the Alliance

proceeding on the basis that it was interested as a competitor.

A party to a proceeding may have more than one basis for interest, pointed out the court, each entitling him to be a party. And, having status as a party because of one basis of interest already known to the commission, he has a right to give timely notice of another basis for interest which also entitles him to be a party to the proceeding. When he has done that he is a party for two reasons. Obviously, the loss of one basis for interest would not destroy the other, said the court, and, despite its loss, he would remain a party to the proceeding.

The commission had been seasonably informed that economic injury constituted

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a second and continuous basis for the petitioner's interest which, standing alone, clearly entitled it to be a party to the proceeding. It followed that the commission erred in holding the dismissal of the petitioner's application for a construction per-

mit terminated its status as a party to the proceeding. The dismissal terminated only one of the two bases for the petitioner's interest, either of which sufficed to support its status as a party. *Frontier Broadcasting Co. v. United States et al.* 265 F2d 353.



Jurisdiction over Power Sales through Co-operative

THE Wisconsin commission denied a power company's motion to dismiss a proceeding brought by an electric co-operative and a utility company-customer to change the power company's rule on the resale of electricity. Only the jurisdictional question was ruled upon.

The power company argued that the proceeding should be dismissed, urging

that the commission had no power to require the sale of electric energy by the power company, through an unregulated channel, to a public utility. The commission held that it had jurisdiction over the subject matter and ordered further proceedings on the merits of the case. *Re Adams-Marquette Electric Co-op. et al.* 2-U-5124, May 28, 1959.



Officers' Compensation Questioned by Commission

THE North Carolina commission denied a telephone company's application for permission to increase rates, after it had found that a return of at least 4.8 per cent being earned on the fair value rate base was reasonable. In passing upon the claimed operating expenses, the commission questioned payments to officers, reducing, substantially, amounts the company had vigorously contended should be allowed.

The company had been making a \$1,500 annual payment to the president's wife for giving information service from her home. But her name and number had not been listed in the company's last two directories. Such expense is no longer justifiable, said the commission.

The principal matter at issue was whether the compensation the company proposed to pay to its officer-shareholders during 1959 should be included as an operating expense for rate-making purposes. The commission agreed that the services of such persons were of value to the ap-

plicant, and that as long as the payments did not jeopardize the continued operation of the utility, the amount of the compensation was a matter for management.

The commission had no authority or inclination to order such payments discontinued. However, it had the obligation to inquire as to whether the full amount paid was just and reasonable and should be allowed as a deduction when it attempted to fix a fair rate of return. Ordinarily, said the commission, when a utility pays a salary to an outsider for services performed under an agreement made at arm's length, there is a presumption that the payment is reasonable. But where the owners of a utility, acting for it, pay money to themselves in the capacity of officials, the burden of proof is upon such owner-officials to show that services rendered are reasonably worth the compensation paid. Otherwise, any utility might pay to its officer-shareholders all its earnings as salary and never show any return on its investment.

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The burden of proof had not been met, and there was no other telephone company in the area which paid its officers 37 per cent of gross revenues, as the company sought to do. Such considerations, said the commission, do not preclude a finding that the salaries sought to be paid by the company were just and reasonable, but simply indicated the necessity of proof of reasonableness.

Other Rulings

The commission disallowed depreciation on plant ordered but not yet installed.

Also, the commission refused to include in the rate base an amount the company proposed to spend but had not yet spent on additional plant.

The commission did allow the company to amortize to operating revenue deductions, over a 10-year period, the book value of abandoned plant. The working capital allowance was reduced to the extent to which federal tax accruals were available to the company from month to month. *Re Mebane Home Teleph. Co., Inc. Docket No. P-35, Sub 13, June 22, 1959.*



Effect on Existing Carriers Must Be Considered in New Certificate Grant

THE Kentucky court of appeals reversed a judgment affirming a Department of Motor Transportation grant of a motor carrier certificate for a new route in an area served by two other carriers. A new carrier who wishes to invade a territory being served by other carriers, the court pointed out, must offer some proof of the inability of the existing carriers to render the service required and must make a real showing of a substan-

tial inadequacy of existing service. The applicant's proof had been clearly insufficient on these issues.

The court also thought that the department had erred in failing to consider the available freight in the territory and the economic aspects of additional service by either the existing carriers or an additional carrier. *Germann Bros. Motor Transp., Inc. et al. v. Flora et al. 323 SW2d 570.*



No Finding of Public Convenience Required in Fixing Commercial Carrier Zone

THE Ohio supreme court ruled that the commission has authority to establish a commercial zone in a district which is commercially a part of a municipality, without first making a finding of public convenience and necessity as to extended motor carrier service within such zone.

The issue of convenience and necessity has already been determined in granting certificates to carriers presently serving the municipalities themselves, the court noted, since the zone extensions authorized

under the controlling statute must be commercially a part of the municipalities. When the commission makes the finding that the zone is "commercially a part of such municipal corporation," as required by the statute, it, in effect, finds that there are convenience and necessity which are the very objects of the zone extension.

Nor does the commission err in extending reciprocal privileges to all motor carriers holding authority at any point in the zone, as well as to carriers holding

PROGRESS OF REGULATION

authority within the municipality about which the zone is created. *Cleveland, C. &*

C. Highway, Inc. et al. v. Ohio Pub. Utilities Commission, 158 NE2d 362.



Transfer of Certificate Rights Requires No Showing of Public Convenience

THE New Mexico supreme court ruled that public convenience and necessity were not required to be shown upon application to transfer a portion of a motor carrier certificate, even though the certificate holder had not previously rendered service under this portion of the certificate and notwithstanding that the type of service in question was being adequately provided by other carriers. The high tribunal sustained a lower court judgment which overturned a commission order withholding approval of the transfer for failure to show public convenience and necessity.

The commission had taken the position that the transfer would result in the crea-

tion of a new, or substantially different, service from that previously rendered under the certificate. It had held that public convenience and necessity should be shown.

The court observed that the controlling statute required merely, as a prerequisite to commission approval of a transfer, that all indebtedness pertaining to the certificate be paid. There was no contention that any such indebtedness had not been paid. In these circumstances, it was unreasonable for the commission to withhold approval. *Bekins Van & Storage Co., Inc. et al. v. New Mexico State Corp. Commission et al.* 338 P2d 1055.

Other Recent Rulings

Downward Return Trend. The California commission considered a return of 6.6 per cent on a water company's rate base reasonable, after taking into account an estimated annual downward trend of 0.1 per cent for the future. *Re Southern California Water Co. Decision No. 58530, Application No. 40675, June 2, 1959.*

Sale of Telephone Exchange. The Illinois commission approved the sale of a telephone company's plant and properties to another company upon a showing that the seller was rendering inadequate service to residents of the area, that the seller had neither the resources nor the authority to provide adequate service, and that the purchaser was ready, willing, and able to provide such service. *Re New Windsor Teleph. Co. No. 45611, June 3, 1959.*

Rail Passenger Service. The Connecticut commission denied a petition of about twenty-five commuters to require a railroad to restore flooded-out service between Waterbury and Hartford, since such service would add substantially to the railroad's heavy losses on passenger service and since, moreover, economical bus service was available. *Re Plainville Commuters' Asso. Docket No. 9730, June 4, 1959.*

Best Protection. The Missouri commission said that a doubt in the matter of the character of protection needed at certain crossings should be resolved in favor of the best protection rather than in favor of what might be adequate. *Re Terminal R. Asso. of St. Louis et al. Case No. 14119, June 10, 1959.*

PUBLIC UTILITIES FORTNIGHTLY

Common Stock Issue. Connecticut Water Company, requiring funds for construction and having a debt ratio of 56 per cent, obtained the Connecticut commission's permission to issue a substantial amount of no par common stock at a subscription price $4\frac{1}{2}$ per cent below market, with stockholders' subscription rights preserved and with an underwriting agreement involving moderate "stand-by" and "take-up" fees. *Re Connecticut Water Co. Docket No. 9787, June 4, 1959.*

Monopolistic Rights. The Colorado commission commented that regulated monopoly is not always a complete substitute for competition, since, as a practical matter, monopolies are frequently not responsible to regulation, and regulation, while it may supply some of the checks of competition, cannot supply all of the stimulus to better and cheaper service. *Re Pikes Peak Automobile Co. Application No. 16937, Decision No. 52468, June 11, 1959.*

Debt Ratio Reduction. A water company, requiring funds to pay off short-term debt and to redeem outstanding bonds and preferred stock, was authorized by the Connecticut commission to issue common stock, preferred stock, and bonds in proportions which will reduce the company's debt ratio from $66\frac{1}{2}$ per cent to $51\frac{1}{2}$ per cent. *Re Greenwich Water Co. Docket No. 9790, June 12, 1959.*

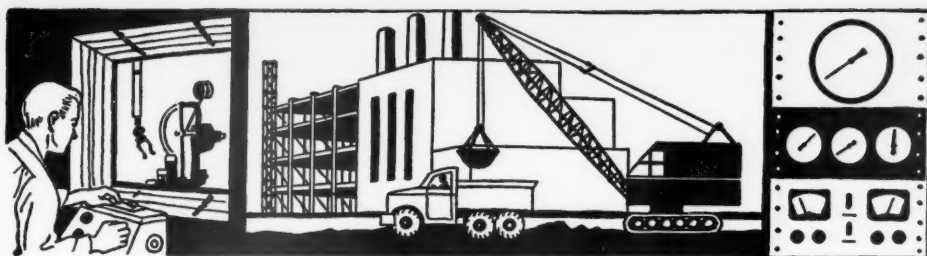
Radio Station Permit. The U. S. court of appeals refused to disturb a Federal Communications Commission grant of a radio station construction permit, to be operated on the same frequency as a radio station in another geographic area, where the evidence showed the need for the new

service outweighed the service which would be lost by reason of interference with the other station. *Interstate Broadcasting Co., Inc v. Federal Communications Commission, 265 F2d 598.*

Measure of Public Need. Negligible use of trains at a few small communities does not warrant a finding that public necessity for the trains exists or that their removal would entail substantial public inconvenience, said the Alabama supreme court, and the true interests of the public are best served by the elimination of uneconomic services if it can be done without unduly impairing transportation facilities in the area. *Alabama Pub. Service Commission v. Southern R. Co. 111 So2d 214.*

Bankrupt Certificate Holder. The New York commission held that the failure of the general assignee or trustee in bankruptcy to continue transportation service of a motor common carrier certificate holder pending the settlement of the bankrupt's estate does not of itself induce a dormant condition fatal to the certificate. *Re H. E. Swezey & Son Motor Transp. Case MT 1161, June 9, 1959.*

Cartage Authority. The Colorado commission granted a cartage certificate holder additional authority to extend irregular and occasional service to a certain area, upon the basis of public convenience and necessity, where it appeared that the efficiency of other carriers would be only remotely affected and the operating experience and financial responsibility of the applicant had been established to the satisfaction of the commission. *Re King (A-One Express Moving & Storage Co.) Application No. 17113, Decision No. 52501, June 22, 1959.*



Industrial Progress

Westinghouse Spending \$25 Million to Boost Turbine, Generator Production

WESTINGHOUSE Electric Corporation has announced that it will spend more than \$25 million to expand and modernize facilities for the manufacture of turbines, generators, large motors and related heavy apparatus at plants in Lester, Pa., East Pittsburgh, and Sunnyvale, Calif.

The extensive program was initiated to provide adequate manufacturing facilities to meet anticipated peak loads during the 1962-64 period.

Largest segment of the coast-to-coast program is a \$21 million modernization and rearrangement at the company's steam division at Lester which will increase production capabilities there by approximately one-third. The project, which will be completed early in 1961, was announced by W. C. Rowland, vice president in charge of the steam division. The program there affects the large and medium turbine and heat transfer apparatus departments, which produce steam turbines, condensers, heat exchangers, and nuclear steam generators as well as marine propulsion turbines and gears.

At East Pittsburgh, L. B. McCully, vice president, announced that the East Pittsburgh division's third major program to be started in the last 13 months will expand the large rotating apparatus department which builds generators for electric utilities and large motors. This latest East Pittsburgh program will cost more than \$3 million, and will provide an additional 65,000 square feet of manufacturing space, in addition to permitting some rearrangement of facilities.

The Sunnyvale, Calif., manufacturing division, which manufactures somewhat smaller turbines than are built at Lester along with a wide variety of other equipment, will spend more than a million dollars to boost its

steam turbine capacity, it was announced by division manager J. S. Hagan. This program calls for more and larger machine tools, but no new buildings.

Outlines Improvements

Among steam division improvements planned, Mr. Rowland stated, are these:

1. In the large and medium manufacturing areas, a rearrangement of present facilities to provide improved component manufacturing with a minimum of interdepartment and intrashop movement of materials.

2. Detailed machining and assembly operations to be consolidated in manufacturing areas. This includes providing a separate area for the manufacture and test of all steam controls.

3. Consolidation of the fabricating and welding department within one building of the large and medium turbine manufacturing operation.

4. Grouping of widely separated transportation, garage and receiving department facilities in a central location, and expansion of shipping areas.

5. Rearranged facilities in the blade shop to permit more modern manufacturing methods. A 16,000-pound steam-accelerated hammer will be acquired for the forging of large turbine blades to assure sufficient capacity to meet the peak loads. Diaphragm manufacturing facilities will be brought together by adding a 200-foot extension to the first floor of the present blade shop.

6. Grouping of heat transfer apparatus department manufacturing facilities into one building which will be extended 200 feet. Heat transfer apparatus includes condensers, heat exchangers, feedwater heaters, pumps, and nuclear steam generators.

7. Among the new machine tools are a 16-volt milling planer costing over \$1 million; two large engine lathes to handle 30-ton, 25-foot-long turbine

spindles; and several specially designed machines with automatic cycling features for milling grooves in spindle discs for holding blades.

"Increased population, more rapid family formations and continued pressure towards automation in both residential and industrial areas," Mr. Rowland said, "are among the factors pushing the future sales load for land turbines to increasingly higher levels."

"Authority given the Maritime Commission by Congress, to replace all subsidized operators' ships after a 20-year life period," he added, "will cause a continuing program through the next 15 years for commercial ship replacement. Requirements for non-subsidized ships, particularly oil tankers, will also increase during the 1960-1965 period."

Mr. Rowland pointed out that many factors indicate a modernized plant at Lester is a step toward meeting this peak demand. He cited as examples the ample acreage for rearrangement of existing manufacturing facilities; availability of skilled workers in the area; closeness of supply sources of major materials such as large forgings, castings and weldments; access to a large supply of water which is required for the testing of the division's products as well as finished products from the plant.

Studebaker-Packard Reports Wide Acceptance of Lark

STUDEBAKER-Packard Corporation reports that it is making a substantial invasion of the fleet sales market with the compact economical Lark with approximately 8 per cent of this year's production going to corporations and governmental units.

"The six and eight-cylinder Lark have caught the interest of economy minded purchasing agents as well as the general public," reports Allen E.

(Continued on page 20)

Fitzpatrick, manager of the S-P Fleet Sales Division.

"Twenty states and 130 governmental units in cities and counties have made fleet purchases of the Lark and the Studebaker truck," Mr. Fitzpatrick said. The Studebaker taxicab, the Econ-O-Miler, also plays a part in fleet sales. Studebaker being one of the only two companies making a taxicab as such. Large orders have gone to public utilities, telephone companies, insurance companies and a wide variety of others.

Computer Bulletin Available

A NEW, 6-page illustrated bulletin describes highlights of the Bendix G-15 digital computer with particular emphasis on the magazine-loaded photo tape reader which is offered as standard equipment. Also included are descriptions of POGO and INTERCOM 1000 programming systems; accessory punched card magnetic tape and paper tape equipment; several special purpose devices and G-15 specifications. Copies will be mailed on request. Bendix Computer Division, 5630 Arbor Vitae Street, Los Angeles 45, California.

New Bulletins Describe Trip Valve, Regulator

AMERICAN Meter Company has recently published two new bulletins, entitled "Reliance Type 196 Differential Operated Trip Valve" and "Reliance Type 299 Pressure Regulator."

The Type 299 Pressure Regulator, for reducing applications, is described in Bulletin 124. It is a semi-balanced, single-seat, angle-type regulator. It is designed to give trouble-free service under severe conditions prevalent at well heads and in gas field collecting and transmission lines. The Type 299 Regulator will handle gas having a high solids content, withstands temperatures from minus 60° F. to 180° F., and has a maximum inlet pressure of 3000 psi.

Bulletin 170 describes the Type 196 Differential Operated Trip Valve. It is designed for use on transmission lines, at section valves and at regulator and compressor stations to isolate line breaks. It has a wide range of protective applications, such as safety air shut-offs on kilns. The cast bronze, manual reset, snap-action valve operator is tripped by a differential pressure taken from an orifice or valve. Its spring-loaded, valve-seat design enables it to handle widely varying sig-

nal pressures without tripping and yet maintain high sensitivity and accuracy at the set point. Models operated on upstream or downstream line breaks. Maximum working pressure is 1000 psi.

Copies of these bulletins can be obtained from Advertising Department, American Meter Company, 920 Payne Avenue, Erie 6, Pennsylvania.

Consumers Power Plans To Spend \$117,500,000 in 1959

CONSUMERS Power Company spent \$90,300,000 in 1958 to expand and improve its electric and gas facilities in sixty-four Michigan counties in order to meet the increasing need of its customers. For 1959 total expenditures of \$117,500,000 on construction and improvements are planned.

New Light and Heavy Duty Safety Switches Announced By G-E

NEW light- and heavy-duty safety switches incorporating many innovations for safety in operation and installation are now available from the Circuit Protective Devices Department, General Electric Company.

The advanced new design includes a highly visible red insulated front-operating handle and a large metal nameplate to provide ON-OFF identification from over 100 feet away.

A second innovation eliminates all fiber parts from the operating mechanism. Fiber is subject to deterioration and possible rupture through age, moisture and heat.

The new switches are described in Bulletin CPD-74, available from the Distribution Unit, General Electric Company, Plainville, Conn.

Power Companies Setting "Living Examples" To Demonstrate Higher Footcandle Program

ELECTRIC power companies throughout the nation are enthusiastically setting living examples of good lighting practices based on new recommendations of the Illuminating Engineering Society, according to James M. Gilbert, president of Silvray Lighting, Inc., Bound Brook, N. J. Silvray is the company which pioneered in the development of a practical, efficient application of General Electric's Power Groove fluorescent tube with the Modular 200 I. L. C.

(Indirect Luminous Ceiling) for commercial use.

"Utilities are taking the story of good lighting and the Blackwell report to their customers," Mr. Gilbert adds. "In New York, Consolidated Edison has installed the new Silvray system in nine of its executive offices. The battle to double off-peak revenue in business and commercial lighting by raising footcandles from 100 to 200 has been joined by Detroit Edison, Union Electric of St. Louis, Baltimore Gas and Electric, New Orleans Public Service and Niagara Mohawk Power Corporation, all of whom have installed our seeing systems."

In addition, Mr. Gilbert reports, Niagara Mohawk has mounted a special exhibit of planned office lighting. Selecting as a prototype of efficient lighting the highly promoted Colorcoil by Silvray, the power company has constructed a model office for display in lobbies and windows of its own buildings and at various conventions and exhibitions throughout its service area.

20 Per Cent Increased Loadability Announced by G-E For new Pole-Type Distribution Transformers

A NEW insulation system called Permalex (trademark of G-E) will permit peak loads to be increased an additional 20 per cent of transformer rating with no sacrifice in life expectancy for a new line of pole-type distribution transformers introduced by the General Electric Company. Ratings will be available up through 167 kva.

Besides making operating cost reductions possible through greater loadability than ever before, the transformers will require less maintenance than present designs with a new Melastik (trademark of G-E) plastic coating that insulates the transformer covers from accidental shorting by birds and squirrels and reduces other service outages and corrosion.

Other features introduced by the company's Distribution Transformer Department for its new 1959 pole-type model are higher light and breaker settings for self-protected units, improved cover-mounted bushings designed so the internal fuse can be replaced without removing the bushing, and a rolled-under base (on ratings through 100 kva) which will minimize damage from scraping.

INDUSTRIAL PROGRESS—(Continued)

Evaluations of Gas Cleaning Equipment Are Outlined in New AGA Research Report

RESULTS of a new industry-sponsored research project provide a foundation for the design and development of more efficient gas cleaners for the gas utility and pipeline industry, the American Gas Association's Pipeline Research Committee reports.

The committee conducted studies under A.G.A.'s PAR Program (Promotion, Advertising and Research) to determine analytical procedures, cleaning efficiencies, losses, pressure drops and dust loading characteristics of six gas cleaning units now on the market. Equipment evaluated included a filter cleaner, a centrifugal separator and four oil-bath scrubbers.

Pressure drops and cleaning efficiencies were established for each unit, and oil losses were determined for the oil-bath cleaners. Gas through-put rates were varied from approximately 50 per cent to at least 125 per cent of the manufacturers' ratings to determine the effect of flow rate on these operating factors.

The committee's findings are presented in an A.G.A. report entitled "Performance of Commercial Gas Cleaning Equipment." Copies are available at \$2.00 each from the American Gas Association, 420 Lexington ave., New York 17, N. Y.

\$1.5-Million Boiler Contract Awarded to Babcock & Wilcox by Madison Gas & Elec.

THE Babcock & Wilcox Company reported recently the receipt of a contract for more than \$1.5-million to manufacture and install a boiler for the Madison Gas & Electric Company (Madison, Wisconsin).

Officials of Babcock & Wilcox's Chicago district sales office said that the boiler, which is scheduled to go into operation at the utility's Blount Street Station during the summer of 1961, is a duplicate of a B&W-manufactured unit which went on-line there in 1957.

The new boiler will be capable of generating 400,000 pounds of steam per hour continuously with four hour peak loads of 425,000 pounds. Designed for a pressure of 1525 pounds per square inch, it will operate at a pressure of 1350 psi and a temperature of 950 degrees Fahrenheit. The boiler will burn pulverized coal at a rate of 43,300 pounds per hour and, also, will have arrangements for future gas firing.

The Pioneer Service & Engineering Company, of Chicago, is the engineer for the expansion of the Blount Street Station, which serves a population of approximately 150,000 people in Madison and surrounding suburbs.

Blaw-Knox Designs 261 Steel Towers For Jersey Central P & L

EXPANSION of transmission facilities by Jersey Central Power and Light Company, Asbury Park, N. J., will require installation of approximately 261 steel towers on the firm's new Larrabee-Mercer line.

The line will carry 230-kilovolt, double circuit wires on towers ranging in height to 208 feet.

Designed by Blaw-Knox Company, Blawnox, Pa., the towers will require use of more than 3,500 tons of steel during fabrication at the firm's Pittsburgh area plant.

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Corona Level Measurements Discussed in Latest Rome Cable Conference Paper

ORIGINALLY presented at the Winter General Meeting of the A. I. E. E. in New York, a conference paper, "Corona-level Measurements on Insulated Cables" is now available through Rome Cable Salesmen.

The twelve-page, illustrated bulletin (RCT 711), written by R. C. Graham and I. J. Marwick, Rome Cable Corporation, deals with the detection of undesired ionizable voids or air spaces in the manufacture and operation of high voltage cables.

Included in the bulletin are sections on detectors, standards and sensitivity, equipment installation, testing, future developments and applications. There is also an illustrated appendix of tables, block diagrams, and explanatory photographs describing Corona-Level Test procedures.

S. M. Arnow Joins C. H. Wheeler Mfg.

SAMUEL M. Arnow has joined C. H. Wheeler Manufacturing Company of Philadelphia, producer of steam power plant condensers, pumps and marine auxiliary equipment, as consulting engineer.

Mr. Arnow's appointment was effective July 1st, following his retirement from Philadelphia Electric Company, where he was Senior Mechanical Engineer. He had been with the company for 35 years.

G-E to Conduct Nuclear Superheat Programs for AEC

A \$2.7 million study proposal by the General Electric Company for increasing the efficiency of nuclear power plants by superheating steam has been selected by the Atomic Energy Commission for contract negotiations, the company announced recently.

The nuclear superheat program will be carried out by the General Electric Atomic Power Equipment Department (APED) at its San Jose facilities and its Vallecitos Atomic Laboratory at nearby Pleasanton, Calif., George White, APED general manager, said.

The proposal was one of two selected from among nine submitted by various companies to the AEC. The objective of the study is to investigate methods to add more heat to the steam produced by water-type nuclear reactors. Presently, these reactors produce steam in a saturated form. An increase of nuclear fuel in the core of

the nuclear plants simply generates more saturated steam.

Superheating methods will be sought to reintroduce the saturated steam to a nuclear heat source to boost its temperature above the saturation temperature.

An increase of about 10 per cent in the efficiency of the original energy conversion is expected in the superheating process, thus permitting future expansion of the kilowatt output of nuclear power plants while simultaneously reducing capital cost of turbines and auxiliary equipment.

Thus far, no nuclear reactor in this country has been built which produces steam and then transfers heat to this steam by nuclear superheat methods for power-producing purposes. The superheat program for the AEC is expected to continue over a period of two and one-half years, White said.

In May, APED began the first production in this country of nuclear superheated steam in a company-financed experiment. White said that to date the experiment has produced steam at 825 degrees fahrenheit, and at 930 pounds per square inch pressure.

The experiment, called superheat advance demonstration experiment (SADE), is being conducted in a fuel-containing process tube inserted into the core of the Vallecitos Boiling Water Reactor in place of a normal element. The uranium oxide fuel element in the tube superheats the saturated steam from the main steam line which is passed through the tube.

The SADE experiment will be continued under the AEC program to test the fuel element's performance under steam coolant conditions and to determine the magnitude of the radiation levels in the superheated steam produced.

Also included in the superheat program, now under negotiation, are studies on reactor design and power cycle analysis, fuel and materials technology analysis and development, experimental physics work, as well as coolant chemistry and radiation carry-over analysis.

A-C Booklet Gives Story of Company

ALLIS - CHALMERS Manufacturing Company, Milwaukee 1, Wis., has issued a 32-page color booklet, "Better Tomorrows Begin Today at Allis-Chalmers," which provides a quick look at the facilities and products made in each of the company's works.

The booklet gives capsule facts

about power generating and electric transmission and distribution equipment, processing machinery, farm industrial tractors, harvesting road building machinery, nuclear search and development, and all of other product lines manufactured Allis-Chalmers in this country and abroad.

Ebasco Services Gets Award For Florida P&L Generator

FLORIDA Power & Light Company has awarded a contract for a 300,000 kilowatt generator to Ebasco Services, Inc., of New York. Amount of the contract was undisclosed. In announcing the award, Florida utility said bids had been submitted by both domestic and foreign manufacturers for a smaller 240,000 kilowatt unit, but a later review of requirements indicated a larger generator was needed. The 300,000 kilowatt unit, to be delivered by May 1962, "is larger than any that the foreign concerns could deliver" by the date, Florida Power & Light said.

Two Concerns Form Firm To Make Power Capacitors

ALLIS-CHALMERS Manufacturing Company, Milwaukee, and Ohio Brass Company, Mansfield, Ohio have formed a new corporation to be known as OBAC Inc., to "acquire and expand facilities for manufacture of power factor capacitors for utility and industrial applications," the Milwaukee concern announced.

The companies will share equally the new concern, which is located in Mansfield. The announcement indicated facilities of OBAC will supplement production of the Vorex line of power capacitors and equipment introduced in 1957 by Ohio Brass. Allis-Chalmers plans to announce shortly a line of capacitors it will place on the market using the OBAC production facilities.

Hubbard Names Hollingsworth General Sales Manager

THOMAS HOLLINGSWORTH has been appointed general sales manager of Hubbard and Company, police hardware and electrical apparatus manufacturer. He will operate out of their Chicago executive offices.

Mr. Hollingsworth was most recently director of marketing for Electrical Engineers Equipment Company, a Hubbard subsidiary.

Before joining the Hubbard organization, Mr. Hollingsworth was man-

"Bootstrap" Power

OPERATION BOOTSTRAP, Puerto Rico's burgeoning industrialization program, next year will have available some 82,500 kilowatts of electric energy when a 146-ton generator stator and its connecting steam turbine go into service to become the largest electric power generating machine placed in operation in the Caribbean Sea area.

Produced by General Electric Company's Medium Steam Turbine, Generator and Gear Dept., Lynn, Mass., the huge 25-foot long generator stator was easily hoisted aboard the Bulwer vessel S.S. Carolyn, but it will be a different matter when the ship arrives at Puerto Rico.

Due to the lack of heavy lifting facilities in Puerto Rico, the Carolyn will be weighted down with some 500,000 pounds of sugar to bring the ship's freeboard about even with the dock. Then the generator stator will be slid ashore on greased planks. This 82,500 kilowatt unit, and a similar one also to be constructed by General Electric, will be placed in operation at the Palo Seco power plant near San Juan by the Puerto Rican Water Resources Authority.

E Awarded National Safety Council Award of Merit

GENERAL ELECTRIC Company has been awarded the National Safety Council's Award of Merit for its outstanding company-wide safety record over the past year.

The Council calculated that in compiling the record which merited the award, General Electric reduced disabling injuries at a rate of 22 per cent. This represents an estimated saving of 43,000 man-days from the previous year, or saving that approximates a plant of 100 employees operating for an entire year.

The Award was presented to Company President Robert Paxton by Governor Howard Pyle, President of the Council and former Governor of Arizona. Governor Pyle pointed out that since the Award was made on the basis of comparison with similar companies who are members of the

National Safety Council—generally the most advanced companies in the nation with respect to safety—the achievement is all the more significant.

A recent study in connection with the Company's safety activities showed that General Electric employees are actually safer on the job than in their own homes. The study also determined that such safety-oriented families are 16 times safer in their cars than the national average, and have considerably fewer non-occupational accidents than other people in the same community.

Air Conditioning and Refrigeration Equipment Exhibit Planned

EXHIBITS of air-conditioning and refrigerating equipment used in virtually every business and industry in the country—and essential to the operation of many of them—will be on display at the 11th Exposition of the Air-Conditioning and Refrigeration Industry at Atlantic City, N. J., November 2-5, according to R. H. Luscombe, chairman of the Exposition

Committee of the Air-Conditioning and Refrigeration Institute, sponsor of the show.

Because of this mammoth display of the very newest in equipment and applications of the refrigeration cycle, it is expected that designers, specifiers and purchasers from federal, state and municipal governments, as well as such widely divergent industry users as the electrical and electronics industries, the tobacco and textile industries, and many more will want to attend to keep up-to-date on the equipment made especially for their specific needs.

A special feature of the Exposition this year will be a "conference session" on Tuesday, November 3, at which outstanding authorities will speak on new developments and trends in such fields as commercial refrigeration, residential air-conditioning, and commercial and industrial air-conditioning. Included in these discussions will be reports on studies made showing how the efficiency of personnel as well as many types of machines and other devices is enhanced by controlled temperature and humidity.

NEW ISSUE

July 17, 1959

\$20,000,000

Yankee Atomic Electric Company

**First Mortgage Sinking Fund Bonds, Series A 5%
Due January 1, 1982**

Yankee Atomic Electric Company was established to construct and operate a uranium fueled steam electric generating plant of 134,000 kilowatt rated capacity at Rowe, Massachusetts. The entire capital stock of the Company is owned by the following New England utility companies: New England Power Company, The Connecticut Light and Power Company, Boston Edison Company, Central Maine Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company, Public Service Company of New Hampshire, Montaup Electric Company, New Bedford Gas and Edison Light Company, Cambridge Electric Light Company and Central Vermont Public Service Corporation.

The undersigned acted as financial advisor to Yankee, assisted in the development of its overall financial structure and negotiated purchase agreements relating to the direct placement of the above Bonds.

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by Francis X. Welch, B. Litt., LL. B., LL. M.

The satisfactory solution of the most expensive and difficult problem of Commission Regulation—The Rate Case—depends very largely upon how well and how thoroughly the details of *preparation*

have been given attention. "Preparing for the Utility Rate Case" is a compilation of experiences taken from the records of actual rate cases. It has required two years of research, study and analysis, conducted by Francis X. Welch, Editor of PUBLIC UTILITIES FORTNIGHTLY, with the aid and cooperation of selected experts, to complete this treatise.

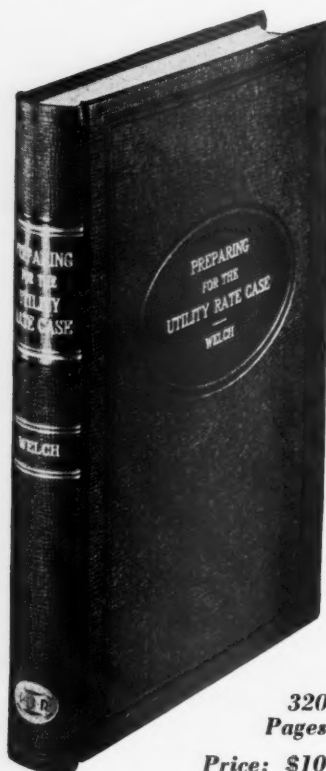
The volume, being the first of its kind, should be found invaluable to *utility executives, rate case personnel, attorneys, accountants, consultants, regulatory commissions, rate case protestants*, and, in fact, to all persons engaged in or having an interest in rate cases.

Among the values of this compilation are the reviews of methods and procedures, which have been found helpful in—

- ▶ simplifying and speeding up rate case groundwork
- ▶ saving time and expense of companies, commissions and other parties
- ▶ cutting down "lag losses"
- ▶ aiding the consumer by making possible faster plant and service improvements
- ▶ increasing the confidence of investors

—all of which are in the public interest.

The volume does not offer a program of standardized procedures for rate case preparation, but *reviews the plain and practical methods that have been used.*



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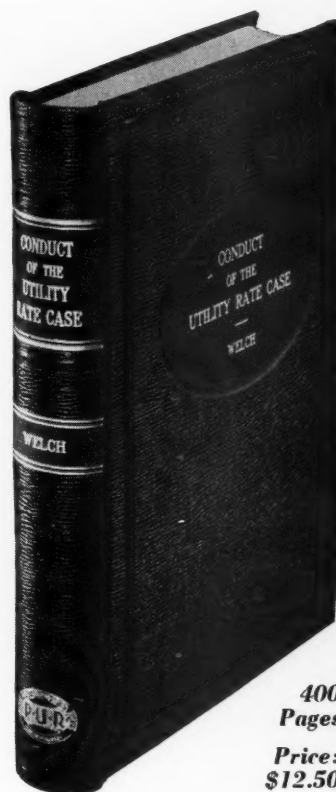
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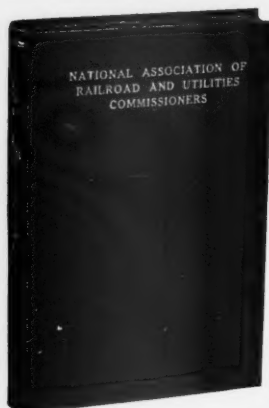
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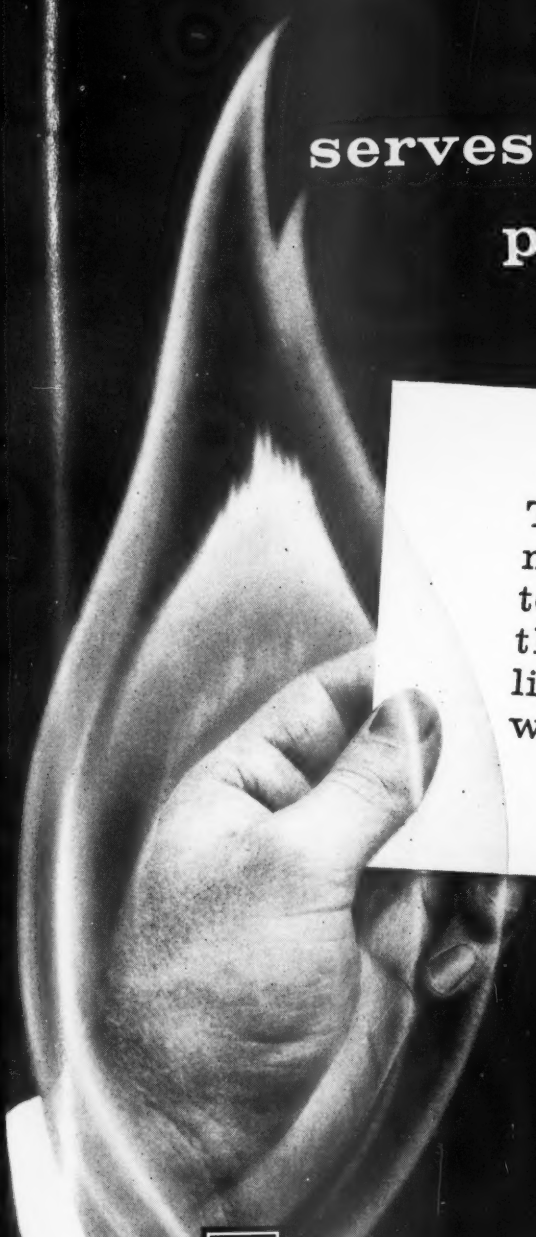
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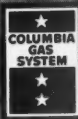
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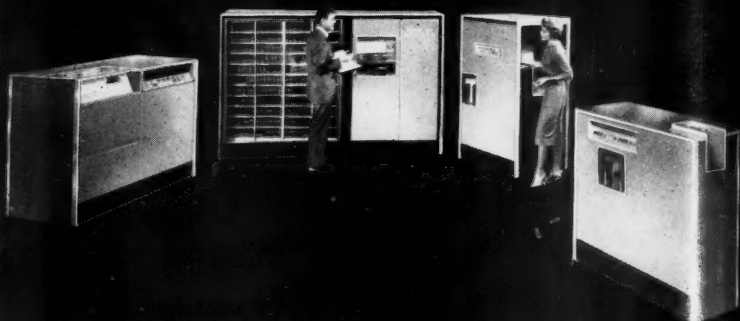
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